

GAO

Report to the Honorable  
Duncan Hunter, House of  
Representatives

March 1998

# OVERSEAS PRESENCE

## Issues Involved in Reducing the Impact of the U.S. Military Presence on Okinawa



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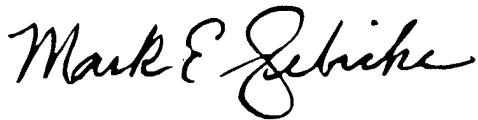
The Honorable Duncan Hunter  
House of Representatives

The United States and Japan released the Final Report of the Special Action Committee on Okinawa on December 2, 1996. The report made 27 recommendations to reduce the impact of the U.S. military presence on the Okinawan people. As requested, we reviewed the contents of the Final Report, evaluated the impact on readiness of U.S. forces based on Okinawa after implementation of the report recommendations, estimated the U.S. cost of implementing the recommendations, and determined the benefit or necessity of having U.S. Marine Corps forces on Okinawa.

We are sending copies of this report to the Chairmen and Ranking Minority Members of the House Committee on National Security, the Senate Committee on Armed Services, and the House and Senate Committees on Appropriations; the Secretaries of State, Defense, the Army, the Navy, and the Air Force; and the Commandant of the Marine Corps. We will make copies available to others on request.

This report was prepared under the direction of Carol R. Schuster, Associate Director, Military Operations and Capabilities Issues, who may be reached on (202) 512-3958 if you or your staff have any questions. Other major contributors are listed in appendix III.

Sincerely yours,



Mark E. Gebicke  
Director, Military Operations  
and Capabilities Issues

# Executive Summary

## Purpose

The United States maintains a military presence of about 100,000 servicemembers in the Asia-Pacific region. Of this presence, 47,000 servicemembers are in Japan, over half of whom are based on Okinawa. On December 2, 1996, the United States and Japan agreed to a number of recommendations for reducing the impact of U.S. military operations and training on the people of Okinawa and thereby strengthening the U.S.-Japan alliance. These recommendations were set forth in the Final Report of the Special Action Committee on Okinawa (SACO) and are to be implemented over the next decade. Concerned over the impact that implementation of SACO recommendations will have on the readiness and training of U.S. forces stationed on Okinawa, Congressman Duncan Hunter requested GAO to review several issues. This report (1) describes the Department of Defense's perspectives on the need for U.S. forces on Okinawa and (2) describes SACO's report recommendations and identifies the impact of their implementation on U.S. operations, training, and costs, particularly the recommendation to build a sea-based facility off Okinawa. The report also provides information on two environmental issues that may result from implementing the SACO recommendations.

## Background

The U.S. military presence in Japan and on Okinawa began at the end of World War II. Although the U.S. occupation in Japan ended in 1952, U.S. administration continued on Okinawa until 1972. The U.S.-Japan security relationship is defined by a number of documents, including the Treaty of Mutual Cooperation and Security, which commits both countries to meet common dangers, and a Status of Forces Agreement that governs the legal status of U.S. forces and their dependents stationed in Japan. The U.S. forces on Okinawa occupy about 10 percent of the land in the prefecture.<sup>1</sup> Japan provides part of the cost of the forward deployment of U.S. forces throughout Japan, through an annual burden-sharing payment. This payment was about \$4.9 billion in fiscal year 1997.

Discontent among the people of Okinawa regarding the U.S. military presence and its impacts has been rising for years. Their chief complaint is that the Okinawa prefecture hosts over half of the U.S. forces in Japan and that about 75 percent of the land U.S. forces occupy in Japan is on Okinawa. They also believe the U.S. presence has hampered economic development. The abduction and rape of an Okinawan schoolgirl in September 1995 by three U.S. servicemembers prompted the U.S. and Japanese governments to establish the SACO in November 1995. To reduce

<sup>1</sup>Japan is divided into 47 local administrative jurisdictions, or prefectures. The Okinawa prefecture includes the main island of Okinawa plus several outlying islands.

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the impact of the U.S. military presence on the people of Okinawa, the SACO developed recommendations to realign, consolidate, and reduce U.S. facilities and adjust operational procedures. In December 1996, the United States agreed to return to Japanese control about 21 percent of the land on Okinawa used for U.S. military bases, adjust training and operational procedures, implement noise abatement procedures, and change Status of Forces Agreement procedures. (The SACO Final Report is reprinted verbatim in app. I.)

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## Results in Brief

The Department of Defense (DOD) believes that Marine Corps forces along with other U.S. forces on Okinawa satisfy the U.S. national security strategy by visibly demonstrating the U.S. commitment to security in the region. These forces are thought to deter aggression, provide a crisis response capability should deterrence fail, and avoid the risk that U.S. allies may interpret the withdrawal of U.S. forces as a lessening of U.S. commitment to peace and stability in the region. Okinawa's proximity to potential regional trouble spots promotes the early arrival of U.S. military forces due to shorter transit times and reduces potential problems that could arise due to late arrival. The cost of this presence is shared by the government of Japan, which provides bases and other infrastructure on Okinawa rent-free and pays part of the annual cost of Okinawa-based Marine Corps forces.

The SACO Final Report calls on the United States to (1) return land that includes one base and portions of camps, sites, and training areas on Okinawa to Japan; (2) implement changes to three operational procedures, and (3) implement changes to five noise abatement procedures. Additionally, it recommends implementing eight changes to Status of Forces Agreement procedures. In implementing most of the SACO recommendations, the United States expects to encounter few operational and training problems; however, replacing Marine Corps Air Station Futenma with a sea-based facility will be a major challenge. In addition to significant cost, the sea-based facility poses technological and operational complications that must be overcome if U. S. operational capability is to be maintained. The United States has established requirements that Japan must meet as it designs, builds, and pays for the sea-based facility before Futenma is closed and operations are moved to the sea-based facility. However, such a facility has never been built and operated.

Annual operations and maintenance costs for the sea-based facility were initially estimated at \$200 million based on a \$4-billion design and

construction cost, significantly higher than the \$2.8 million currently being paid by the United States at Futenma. The United States requested that the Japanese government pay the cost to maintain the new sea-based facility, but as of the date of this report, it had not agreed to do so. Further, the current schedule for designing and building the sea-based facility does not include a risk-reduction phase that includes risk assessments, life-cycle cost analyses, and design trade-offs. Given the scope, technical challenges, and unique nature of the sea-based facility, a risk-reduction phase would permit the U. S. and Japanese governments to establish that the proposed facility will be affordable and operationally suitable.

Excluding the cost to operate the sea-based facility, the current estimated cost to the United States to implement the SACO land return recommendations is about \$193.5 million over about 10 years. The United States and Japan are negotiating an arrangement under which Japan would assume some SACO-related responsibilities consistent with their domestic laws. This arrangement could result in reduced U.S. costs. U.S. costs include the cost to renovate some facilities at Futenma, previously identified by both the United States and Japan for replacement, until the sea-based facility is ready for occupancy. Japan had planned to replace these facilities but decided not to after SACO was established in 1995. Additionally, the U.S. cost could be significantly higher than the estimated \$193.5 million if Japan does not agree to pay operations and maintenance cost of the new sea-based facility.

While final implementation of the SACO recommendations is intended to reduce the burden of the U.S. forces' presence on Okinawa, two environmental issues could arise. The first issue concerns the potential for environmental contamination being found on military facilities returned to Japan and responsibility for cleanup of those facilities. The second issue concerns the potential adverse effects that the construction and operation of the sea-based facility could have on the environment.

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## Principal Findings

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### U.S. Forces on Okinawa Support National Security Strategy

The III Marine Expeditionary Force (along with other U.S. forces on Okinawa and in the region) supports the U.S. national security strategy to promote peace and stability in the Asia-Pacific region and to deter aggression by forcing an aggressor to risk a military confrontation with

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U.S. forces, according to DOD. The national security strategy and the congressionally mandated Quadrennial Defense Review<sup>2</sup> cite U.S. presence in the region as necessary to demonstrate U.S. political commitment to security in the region. In addition, the United States has long-standing mutual defense treaty obligations with five countries in the region, including Japan and South Korea, and the U.S. forward presence visibly demonstrates commitment to these treaties, according to the U.S. Pacific Command, the geographic combatant command.

In addition to showing the U.S. commitment to the region, the U.S. forces on Okinawa could be used if crises arise, according to the Pacific Command. Furthermore, forward-deployed U.S. forces could readily respond to a contingency because Okinawa is near several potential regional trouble spots, including the Korean peninsula, and the operational risk of a late arrival in an area of operations could be avoided. Moreover, Japan pays a significant share of the Okinawa-based Marine Corps force's annual cost, including the cost of base infrastructure that is provided rent-free to the United States.

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**Building a Sea-Based Facility Will Be a Major Challenge but Other Changes Pose Few Problems**

Of all the SACO recommendations, construction of a sea-based facility to replace Marine Corps Air Station Futenma poses the greatest challenge. Three types of sea-based facilities were under consideration: two would float and one would be supported on columns driven into the sea floor. Some local opposition has surfaced against the facility in the area in which it is to be built, but U.S. officials are proceeding on the basis that the facility will be built. The United States and/or Japan will face (1) significant costs to acquire and maintain the facility; (2) major technological challenges, as no sea-based facility of the type and scale envisioned has ever been built; and (3) operational complications because the sea-based facility envisioned would be insufficient to support all U.S. operating requirements and maintain maximum safety margins, as stated in a Marine Corps study.

The United States also runs the risk that Japan will design and build a sea-based facility that does not meet all U.S. requirements because at the time of GAO's review, U.S. oversight capability was limited. Officials at U.S. Forces Japan and the Naval Facilities Engineering Command told GAO that the organizations currently tasked with oversight responsibility cannot

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<sup>2</sup>The Quadrennial Defense Review was required by section 923 of the National Defense Authorization Act for 1997 to study national defense strategy, force structure, force modernization plans, infrastructure, budget plans, and other issues in 1997 and at the start of each newly elected administration after 1997.

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provide the day-to-day detailed oversight such a project requires and still meet their other responsibilities. USFJ has requested establishment of a Project Management Office to oversee and coordinate SACO implementation while the Naval Facilities Engineering Command has asked for funding for a special project office to oversee the design and construction of the sea-based facility.

Japan's acquisition strategy could add to U.S. operating and support costs and increase operational risk unnecessarily. At the time of GAO's review, Japan had not included a risk-reduction phase in its acquisition schedule. Given the scope, technical challenges, and unique nature of the sea-based facility, a risk-reduction phase would allow the U.S. and Japanese governments to prove that the sea-based facility will be affordable and operationally suitable prior to committing to a specific design. The inclusion of a risk-reduction phase in the sea-based facility's acquisition schedule is currently being discussed between the United States and Japanese governments.

U.S. operational capability can be maintained if the problems associated with the sea-based facility can be overcome and Japan imposes no limits on U.S. operating rights in Okinawa other than those recommended by SACO. The SACO recommendations to return land do not significantly add risks to U.S. operations, but at the time of GAO's review, the cost to implement these recommendations was about \$193.5 million above current operating costs over about 10 years. The United States and Japan are negotiating an arrangement under which Japan would assume some responsibilities, consistent with its domestic law thereby reducing U.S. cost. U.S. costs include the cost to renovate facilities at Futenma to maintain base operations while the sea-based facility is designed and built. Japan had planned to replace these facilities under the Japan Facilities Improvement Program<sup>3</sup> but decided not to after the SACO was established in 1995. The United States believes these projects need to be completed in order to continue to operate Futenma during the sea-based facility acquisition period. U.S. costs could be significantly higher than the \$193.5 million estimate because the United States and Japan have not agreed on which country will be responsible for the sea-based facility's maintenance. This cost is estimated to be \$200 million annually based on a \$4-billion sea-based facility design and construction cost. The United States is currently responsible for the maintenance of its facilities in Japan and spends about \$2.8 million annually for maintenance at Futenma.

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<sup>3</sup>Under the Japan facilities budget, Japan pays for certain facilities improvements on installations used by U.S. forces, including new construction under the Japan Facilities Improvement Program, vicinity improvements, and relocation construction and other costs.

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The United States has encountered some problems in implementing one of the three changes to operational procedures. After relocating parachute exercises for Army Special Forces units to nearby Ie Jima Island, about 73 percent of the planned jumps were cancelled, most often for weather-related reasons. These cancellations have put these forces at risk of failing to stay airborne qualified. On the other hand, artillery live-fire training for Marine Corps forces has been relocated from Okinawa to ranges on the main Japanese islands. The training is comparable to that on Okinawa and other ranges in the United States. For the remaining provisions of the SACO report—implementing noise reduction initiatives and changing some Status of Forces Agreement procedures—the United States expects to encounter few problems.

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**Two Environmental Issues Could Arise From Implementing SACO Recommendations**

If environmental contamination is found in areas to be returned under SACO, cleanup could be expensive and reuse could be delayed. When the United States returns land or closes bases in Japan, it is not obligated, under the Status of Forces Agreement, to return lands to the condition they were in when they became available to the United States. According to U.S. Forces-Japan officials, this agreement relieves the United States of an obligation for environmental cleanup. However, DOD policy calls for the removal of known imminent and substantial dangers to health and safety due to environmental contamination caused by operations on DOD installations or facilities designated for return to the host nation. The government of Japan believes it has found hazardous substances on an installation on Okinawa returned by the United States prior to the SACO report. It has requested that the United States look for environmental contamination on its remaining bases on Okinawa and clean up the bases if contamination is found before returning them under the SACO process. If a survey is conducted and contamination is found, a decision would be needed as to whether the United States or Japan would pay cleanup costs.

Regarding the second issue, concerns have been raised that construction of the sea-based facility or the facility itself after construction could adversely affect the ocean environment, including nearby coral reefs. The United States intends to operate at the facility in a manner that protects and preserves Okinawa's natural resources. However, routine operations aboard the facility may inadvertently contaminate the nearby ocean environment, including coral reefs. For example, the accidental runoff of fuels, cleaning fluids, and other substances required for aircraft and base operations could pose a risk. The government of Japan has undertaken a study to determine the condition of the coral.

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## Recommendations

GAO recommends that the Secretary of Defense

- decide on the means to monitor the design, engineering, and construction of the sea-based facility;
- work with Japan to include a risk-reduction phase in the acquisition schedule to establish that the designed sea-based facility will be affordable and operationally suitable;
- take steps to ensure that all U.S. concerns, especially the costs of operations and maintenance on the sea-based facility and operational concerns, have been satisfactorily addressed before Japan begins to build the sea-based facility; and
- request the Japanese government to allocate funds for those projects at Futenma that were cancelled by Japan due to the planned closure of Futenma and are deemed essential to continued operations of the station and the 1st Marine Air Wing until completion of the replacement facility.

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## Agency Comments

In written comments on a draft of this report, DOD concurred with GAO's recommendations and noted that the report effectively outlines the major operational and technical issues involved in realigning, consolidating, and reducing U.S. force presence on Okinawa, as set forth in the SACO process. DOD also noted that the role of Congress will be critical in maintaining the strategic relationship with Japan and therefore the GAO report was timely and welcome. DOD provided technical comments, which were incorporated in the report where appropriate. The DOD response is printed in its entirety in appendix II.

GAO also provided a copy of the draft report to the Department of State. In oral comments, the Department of State concurred with GAO's report and offered one technical change which was incorporated into the report.



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## **Abbreviations**

DOD	Department of Defense
FIG	Futenma Implementation Group
IFR	Instrument Flight Rules
MCAS	Marine Corps Air Station
SACO	Special Action Committee on Okinawa
SCC	Security Consultative Committee
SSC	Security Sub-Committee
USFJ	United States Forces-Japan



# Introduction

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Since the end of World War II, the U.S. military has maintained a presence in Japan and on Okinawa, first as an occupation force and later as an ally committed to maintaining security in the Asia-Pacific region. The security relationship between the United States and Japan is defined through bilateral agreements and is managed through a joint process. Over half of the U.S. forces in Japan are on Okinawa, a presence that has caused increasing discontent among the people of Okinawa. In September 1995, after three U.S. servicemen raped an Okinawan schoolgirl, Japan and the United States formed the Special Action Committee on Okinawa (SACO) to find ways to limit the impact of the U.S. military presence on Okinawa. The Committee developed 27 recommendations to reduce the impact of U.S. operations.

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## The U.S. Military Has Maintained a Presence in Japan Since World War II

Since the end of World War II, the U.S. military has based forces in Japan and Okinawa. The U.S. military occupation of Japan began after World War II and continued until 1952, but the United States administered the Ryukyu Islands, including Okinawa, until 1972.

Since the end of World War II, U.S. forces have mounted major operations from Japan when needed. Among the most important of these operations was the initial defense of South Korea in the 1950-53 Korean War, when Eighth U.S. Army units left occupation duties in Japan to help defend South Korea. The United States again used its bases in Japan and on Okinawa to fight the Vietnam War. Finally, elements of the III Marine Expeditionary Force deployed from their bases on Okinawa to the Persian Gulf during Operation Desert Storm in the early 1990s.

To demonstrate a commitment to peace and security in the Asia-Pacific region, the United States has about 47,000 servicemembers, about half of all U.S. forces deployed in the Pacific region, stationed in Japan. Of the 47,000 U.S. servicemembers in Japan, over half are based on Okinawa, a subtropical island about 67 miles long and from 2 to 18 miles wide, with coral reefs in many offshore locations. In fiscal year 1997, U.S. forces on Okinawa occupied 58,072 acres of the land in the Okinawa prefecture.

## The U.S.-Japan Security Relationship Is Managed Through Bilateral Agreements and a Joint Process

The security relationship between the United States and Japan is defined through bilateral agreements. The Treaty of Mutual Cooperation and Security, signed in January 1960 by the United States and Japan, specifies that each country recognizes that an attack against either country in the territory of Japan is dangerous to its peace and security and declares that both countries would respond to meet the common danger under their constitutional processes. The treaty also commits the two countries to consult with each other from time to time and grants to U.S. military forces the use of facilities and areas in Japan. Lastly, the treaty specifies that a separate Status of Forces Agreement will govern the use of these facilities and areas as well as the status of U.S. forces in Japan.

The Status of Forces Agreement, signed on the same day as the treaty, permits the United States to bring servicemembers and their dependents into Japan. It also contains certain stipulations regarding U.S. forces in Japan, including some exemptions from import duties for items brought into Japan for the personal use of U.S. servicemembers; the right of the U.S. military services to operate exchanges, social clubs, newspapers, and theaters; and legal jurisdiction over U.S. servicemembers and their dependents accused of committing a crime in Japan.<sup>1</sup> The agreement also (1) requires the United States to return land to Japan when the land is no longer needed, (2) specifies that the United States will perform maintenance on bases it occupies in Japan, and (3) relieves the United States of the obligation to restore bases in Japan to the condition they were in when they became available to the United States. U.S. Forces-Japan (USFJ) has interpreted this latter provision to mean that the United States is not required to conduct environmental cleanup on bases it closes in Japan. The agreement also required the United States and Japan to establish a Joint Committee as the means for consultation in implementing the agreement. In particular, the Joint Committee is responsible for determining what facilities U.S. forces need in Japan.

The U.S.-Japan security relationship is managed through a joint process that includes meetings between the U.S. Secretaries of State and Defense and Japan's Minister of Foreign Affairs and Minister of State for Defense, who make up the Security Consultative Committee. The Committee sets overall bilateral policy regarding the security relationship between the United States and Japan.

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<sup>1</sup>Japan also has jurisdiction over U.S. servicemembers and their dependents for offenses committed within Japan and punishable by Japanese law.

Japan pays part of the cost of the U.S. forces stationed in its country with annual burden-sharing payments that totaled about \$4.9 billion in fiscal year 1997.<sup>2</sup> The annual payments fall into four categories. First, Japan paid about \$712 million for leased land on which U.S. bases sit. Second, Japan provided about \$1.7 billion in accordance with the Special Measures Agreement, under which Japan pays the costs of (1) local national labor employed by U.S. forces in Japan, (2) public utilities on U.S. bases, and (3) the transfer of U.S. forces' training from U.S. bases to other facilities in Japan when Japan requests such transfers. Third, USFJ estimated that Japan provided about \$876 million in indirect costs, such as rents foregone at fair market value and tax concessions.<sup>3</sup> Last, although not covered by any agreements, Japan provided about \$1.7 billion from its facilities budget for facilities and new construction which included new facilities under the Japan under the Japan Facilities Improvement Program, vicinity improvements, and relocation construction and other costs.

Finally, in September 1997, the United States and Japan issued new Guidelines for U.S.-Japan Defense Cooperation that replaced the existing 1978 guidelines. The new guidelines provide for more effective cooperation between U.S. forces and Japan's self-defense forces under "normal circumstances," when an armed attack against Japan has occurred, and as a response to situations in areas surrounding Japan that could threaten Japan's security.

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## The SACO Process Is a Reaction to Discontent About the U.S. Military Presence on Okinawa

Discontent among the people of Okinawa about the impact of the U.S. presence on their land has been rising for years, particularly as the economic benefits of the U.S. presence have diminished and the people of Okinawa became relatively more prosperous, according to the Congressional Research Service.<sup>4</sup> Among the chief complaints of the Okinawan people is that their prefecture hosts over half of the U.S. force presence in Japan and that about 75 percent of the total land used by U.S.

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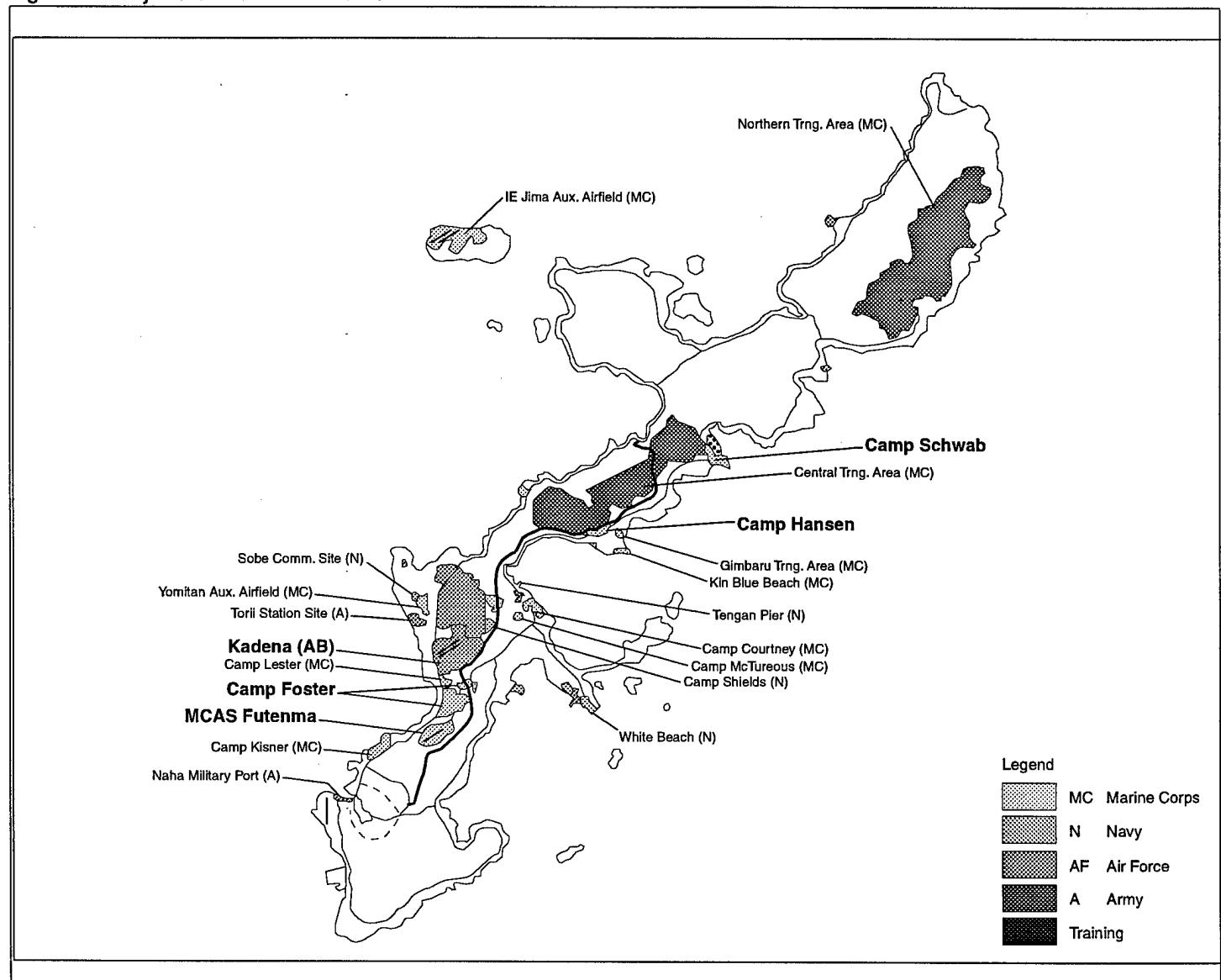
<sup>2</sup>In 1997, Japan's burden-sharing payments totaled about 544 billion yen, or about \$4.9 billion using a conversion rate of 111 yen to \$1.00, according to USFJ.

<sup>3</sup>The Congressional Research Service believes that the Department of Defense (DOD) overstates the true value of burden-sharing payments from Japan because such costs as base lease payments and rents foregone are costs unique to operating in Japan. DOD would not pay these costs if troops based in Japan were relocated to bases in the continental United States. For more information, see the Congressional Research Service's Defense Burdensharing: Is Japan's Host Nation Support a Model for Other Allies? (94-515 F, June 20, 1994).

<sup>4</sup>Congressional Research Service, Okinawa Bases and Other Issues in U.S. - Japan Security Relations (96-646 F, July 23, 1996).

forces in Japan is on Okinawa. Figure 1.1 shows the location and approximate size of major U.S. installations in the Okinawa prefecture.

Figure 1.1: Major U.S. Installations on Okinawa



Source: Marine Corps Bases, Japan.

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Some Okinawans feel the U.S. military presence has hampered economic development. Other Okinawans object to the noise generated by U.S. operations, especially around the Air Force's Kadena Air Base and Marine Corps Air Station (MCAS) Futenma (which are located in the middle of urban areas), and risks to civilians from serious military accidents, including crashes of aircraft. In addition, some have objected to artillery live-fire exercises conducted in the Central Training Area. When the exercises were held, firing took place over prefectural highway 104, and the highway had to be closed to civilian traffic until the exercises concluded. The Okinawa prefectural government has also objected to the destruction of vegetation on nearby mountains in the artillery range's impact area. Lastly, some perceive that crime committed by U.S. personnel and their dependents on Okinawa is a problem.<sup>5</sup>

The public outcry in Okinawa following the September 1995 abduction and rape of an Okinawan schoolgirl by three U.S. servicemembers brought to a head long-standing concerns among Okinawans about the impact of the U.S. presence and made it difficult for some members of the Japanese Diet to support the continued U.S. military presence in Japan.<sup>6</sup> According to the Office of the Secretary of Defense, the continued ability of the United States to remain in Japan was at risk due to the outcry over the rape incident, and the United States and Japan had to do something to reduce the impact of the presence on Okinawans. To address Okinawans' and Japanese legislators' concerns, bilateral negotiations between the United States and Japan began, and the Security Consultative Committee established the Special Action Committee on Okinawa in November 1995. The Committee developed recommendations on ways to limit the impact of the U.S. military presence on Okinawans. On December 2, 1996, the U.S. Secretary of Defense, U.S. Ambassador to Japan, Japanese Minister of Foreign Affairs, and Minister of State and Director-General of the Defense Agency of Japan issued the Committee's final report.

According to USFJ, the SACO Final Report is not a binding bilateral agreement, but it does contain a series of recommendations to which the U.S. and Japanese governments have committed themselves. Officials from USFJ and Marine Corps Bases, Japan, told us that the United States approaches the recommendations as if they were agreements by making

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<sup>5</sup>According to the U.S. Consolidated Public Affairs Office, Okinawa, U.S. personnel make up about 3.8 percent of the population and were responsible for about 1.1 percent of total crime on Okinawa in 1996.

<sup>6</sup>The U.S. servicemembers were convicted. Two were sentenced to 7-year jail terms and one to a 6.5-year jail term.

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reasonable efforts to implement the recommendations. However, they also stated that if Japan does not provide adequate replacement facilities or complete action needed to implement some recommendations, the United States will not be obligated to implement those particular recommendations.

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## Objectives, Scope, and Methodology

In response to Representative Duncan Hunter's concerns about the impact of implementing SACO's recommendations on U.S. force readiness, we describe (1) the benefit or necessity of retaining U.S. forces in Japan and on Okinawa and (2) SACO's report recommendations and identify the impact of implementation on U.S. operations, training, and costs. The report also identifies two environmental issues that may remain after the SACO recommendations have been implemented.

To determine DOD's views on the benefit or necessity of having U.S. forces stationed on Okinawa, we interviewed officials and obtained relevant documents, including the Quadrennial Defense Review report, the President's National Security Strategy for a New Century, The Security Strategy for East Asia, the Commander-in-Chief of the Pacific Command's regional strategy, and other documents. Because it was outside the scope of our work, we did not evaluate any alternatives to forward deployment. However, in a June 1997 report, we concluded that DOD had not adequately considered alternatives to forward presence to accomplish its stated security objectives.<sup>7</sup> To determine U.S. and Japanese obligations under the bilateral security relationship, we reviewed the Treaty of Mutual Cooperation and Security between Japan and the United States, the Status of Forces Agreement, the Special Measures Agreement, Joint Statement of the Security Consultative Committee on the review of 1978 guidelines for defense cooperation, the new 1997 Guidelines for U.S.-Japan Defense Cooperation, and other documents.

To determine SACO's report recommendations, we reviewed the Final Report of the Special Action Committee on Okinawa, Joint Committee meeting minutes and related documents, briefings, the testimony of the Commander-in-Chief of the U.S. Pacific Command to the Senate Committee on Armed Services on March 18, 1997, and other documents. To determine the impact of the SACO report recommendations on readiness, training, and costs of operations of U.S. forces, we interviewed officials and reviewed memorandums, cables, reports, analyses, and other

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<sup>7</sup>Overseas Presence: More Data and Analysis Needed to Determine Whether Cost-Effective Alternatives Exist (GAO/NSIAD-97-123, June 3, 1997).

documents discussing the impact on readiness and training or providing evidence of the impact. To review the feasibility of construction and operation of a sea-based facility, we interviewed officials and reviewed relevant documents, including the Functional Analysis and Concept of Operations report prepared by DOD officials from several organizations, briefing documents, memorandums, and other documents. We also reviewed a number of scholarly papers presented at the Japanese Ministry of Transport's International Workshop on Very Large Floating Structures, held in Hayama, Japan, in November 1996.

To identify the environmental issues that could remain after the SACO recommendations are implemented, we reviewed the Status of Forces Agreement and DOD environmental policy and interviewed DOD and Department of State officials.

We also interviewed officials at the Office of the Secretary of Defense/International Security Affairs, the Joint Staff, headquarters of the U.S. Marine Corps, headquarters of the U.S. Air Force, Office of Naval Research, Defense Logistics Agency, Military Traffic Management Command, and Department of State in Washington, D.C., and the U.S. Special Operations Command in Tampa, Florida. We also interviewed officials from the U.S. Pacific Command; Marine Forces, Pacific; Pacific Air Forces; Naval Facilities Engineering Command; Army Corps of Engineers; Military Traffic Management Command; and East-West Center in Honolulu, Hawaii. We interviewed officials from U.S. Forces-Japan, the 5th Air Force, U.S. Naval Forces-Japan, U.S. Army-Japan, and the U.S. Embassy-Tokyo in the Tokyo, Japan, area. Lastly, we interviewed officials from Marine Corps Bases, Japan; the 1st Marine Air Wing; the Air Force's 18th Wing; the Army's 1/1 Special Forces Group (Airborne); the Army's 10th Area Support Group; the Navy's Fleet Activities, Okinawa; and the Navy's Task Force 76 on Okinawa. To discuss the feasibility of very large floating structures, we interviewed two ocean engineering professors at the University of Hawaii who were instrumental in organizing the 1996 conference in Japan. We also viewed the proposed site for a sea-based facility by helicopter and inspected several U.S. bases affected by the SACO process, including MCAS Futenma; Kadena Air Base; Camp Schwab; and the Northern, Central, Gimbaru, and Kin Blue Beach training areas on Okinawa. We also visited the Ie Jima parachute drop zone on Ie Jima Island.

We obtained comments from the Departments of Defense and State on this report and have incorporated their comments where appropriate.

We conducted our work from June 1997 to March 1998 in accordance with generally accepted government auditing standards.

# U.S. Forces on Okinawa Support U.S. National Security Strategy

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U.S. forces on Okinawa support U.S. national security and national military strategies to promote peace and maintain stability in the region. These forces can also deter aggression and can deploy throughout the region if needed. According to the Office of the Secretary of Defense, the Pacific Command, and USFJ, relocating these forces outside the region would increase political risk by appearing to decrease commitment to regional security and treaty obligations and undercut deterrence. Furthermore, relocating U.S. forces outside of Japan could adversely affect military operations by increasing transit times to areas where crises are occurring. Finally, the cost of the U.S. presence in Japan is shared by the government of Japan, which also provides bases and other infrastructure used by U.S. forces on Okinawa.

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## U.S. Forces on Okinawa Are Part of the Pacific Command's Regional Forward Presence

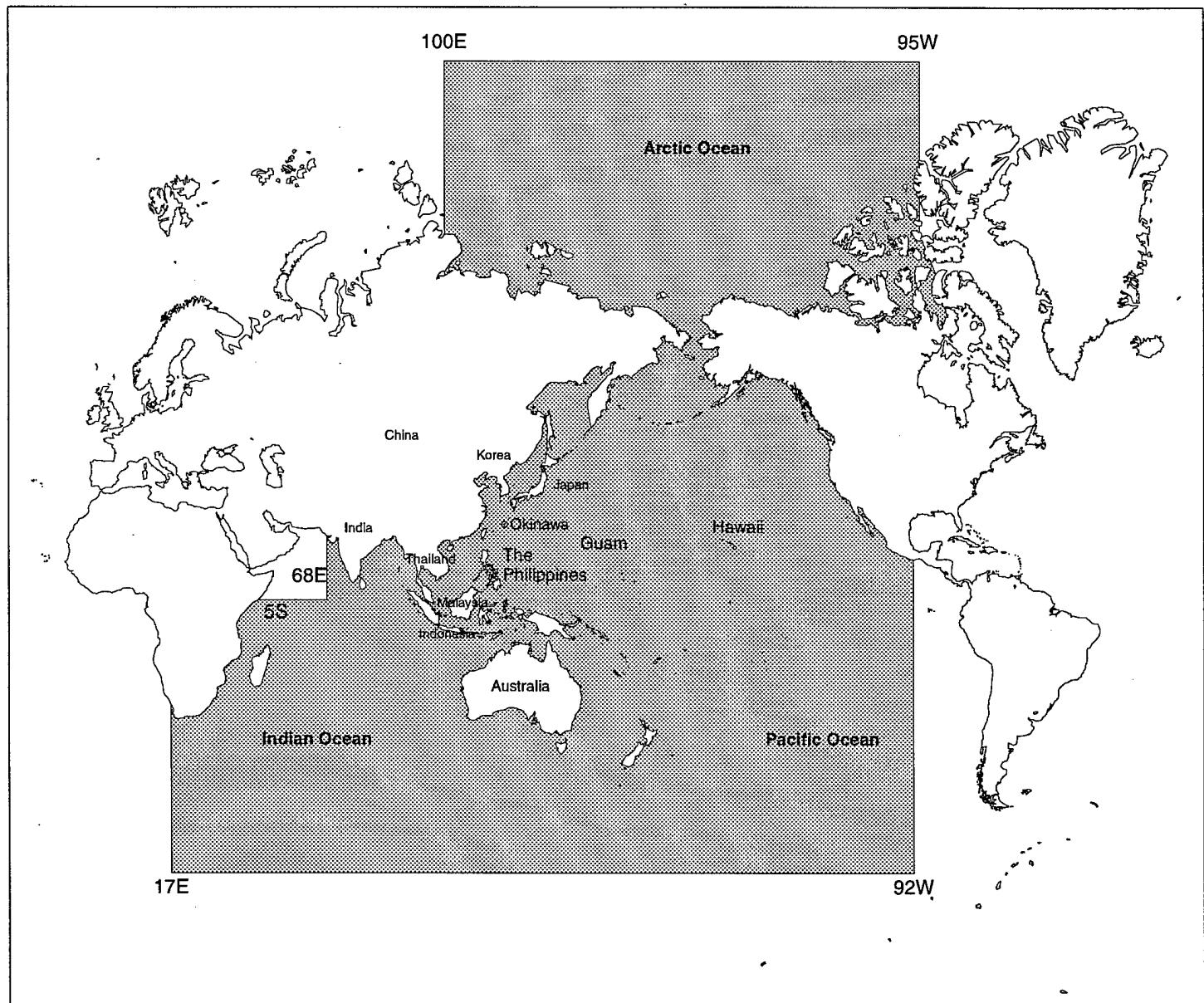
The Commander-in-Chief of the Pacific Command, who is the geographic combatant commander for the Asia-Pacific region, develops a regional strategy to support the national security strategy and the national military strategy. The Pacific Command's area of responsibility is the largest of that of the five geographic combatant commands: it covers about 105 million square miles (about 52 percent of the earth's surface) and contains 44 countries, including Japan, China, India, and North and South Korea (see fig. 2.1).

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**Chapter 2**  
**U.S. Forces on Okinawa Support U.S.**  
**National Security Strategy**

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**Figure 2.1: U.S. Pacific Command's Area of Responsibility**



Source: U.S. Pacific Command.

Pacific Command forces provide a military presence in the Asia-Pacific region, promote international security relationships in the region, and deter aggression and prevent conflict through a crisis response capability, according to the Pacific Command. These forces include over 300,000 servicemembers, of which about 100,000 are in Alaska, Hawaii, Japan, South Korea, and certain other locations overseas. The Quadrennial Defense Review reaffirmed the need for the U.S. forward presence of about 100,000 U.S. troops in the Asia-Pacific region. About 47,000 U.S. servicemembers are stationed in Japan. Of those, about 28,000 are based on Okinawa, including about 17,000 assigned to the Marine Corps' III Marine Expeditionary Force and supporting establishment.

The III Marine Expeditionary Force, the primary Marine Corps component on Okinawa, consists of the (1) 3rd Marine Division, the ground combat component; (2) 1st Marine Air Wing, the air combat component; (3) 3rd Force Service Support Group, the logistics support component; and (4) command element. The Force, and other deployed U.S. forces, support the security strategy by providing the forces that could be employed if crises arise. The III Marine Expeditionary Force can deploy throughout the region, using sealift, airlift, and amphibious shipping, and operate without outside support for up to 60 days.

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## **U.S. Forces in the Asia-Pacific Region Provide Political Benefits**

Under the national strategy, U.S. forward deployment is necessary because it demonstrates a visible political commitment by the United States to peace and stability in the region, according to DOD. The United States has mutual defense treaties with Japan, South Korea, the Philippines, Australia, and Thailand. In addition to demonstrating commitment, the U.S. forward deployment also deters aggression, according to the Pacific Command, because a regional aggressor cannot threaten its neighbors without risking a military confrontation with U.S. forces in place on Okinawa (or elsewhere in the region).

To help maintain peace and stability in the region, the Pacific Command strategy features engagement through joint, combined, and multilateral military exercises; military-to-military contacts; and security assistance, among other activities. According to the Pacific Command, the III Marine Expeditionary Force is a key force that is employed to carry out these activities.

According to the Office of the Secretary of Defense, Pacific Command, and USFJ, a withdrawal of U.S. forces from the region could be interpreted by

countries in the region as a weakening of the U.S. commitment to peace and stability in Asia-Pacific and could undercut the deterrent value of the forward deployment. While U.S. forces may not have to be on Okinawa specifically for the United States to demonstrate such commitments, USFJ officials told us that U.S. forces do need to be located somewhere in the Western Pacific region.

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## The U.S. Presence in Okinawa Provides Operational Benefits

If hostilities erupt in the Asia-Pacific region, U.S. forces need to arrive in the crisis area quickly to repel aggression and end the conflict on terms favorable to the United States. U.S. forces could be used in a conflict and could deploy from their bases on Okinawa. The forward deployment on Okinawa significantly shortens transit times, thereby promoting early arrival in potential regional trouble spots such as the Korean peninsula and the Taiwan straits, a significant benefit in the initial stages of a conflict. For example, it takes 2 hours to fly to the Korean peninsula from Okinawa, as compared with about 5 hours from Guam, 11 hours from Hawaii, and 16 hours from the continental United States. Similarly, it takes about 1 1/2 days to make the trip from Okinawa by ship to South Korea, as compared with about 5 days from Guam, 12 days from Hawaii, and 17 days from the continental United States.

In addition to its strategic location, Okinawa has a well-established military infrastructure that is provided to the United States rent-free and that supports the III Marine Expeditionary Force (and other U.S. forces). Housing, training, communications, and numerous other facilities are already in place on Okinawa, including those at MCAS Futenma, a strategic airfield for the 1st Marine Air Wing, and Camp Courtney, home of the 3rd Marine Division. Marine Corps logistics operations are based at Camp Kinser, which has about a million square feet of warehouse space for Marine forces' use in the Pacific. For example, warehouses hold war reserve supplies on Okinawa that would support U.S. operations, including 14,400 tons of ammunition, 5,000 pieces of unit and individual equipment, and 50 million gallons of fuel. Military port facilities capable of handling military sealift ships and amphibious ships are available at the Army's Naha Military Port and the Navy's White Beach. In addition to providing base infrastructure, Japan provides about \$368 million per year as part of its burden-sharing to help support the III Marine Expeditionary Force deployment on Okinawa.

# Some SACO Recommendations Carry Risk That Must Be Overcome to Maintain U.S. Operational Capability

The SACO Final Report calls for the United States to (1) return land at 11 U.S. bases on Okinawa and replace MCAS Futenma with a sea-based facility, (2) change 3 operational procedures, (3) implement 5 noise abatement procedures, and (4) implement 7 Status of Forces Agreement changes. Japan agreed to implement one Status of Force Agreement procedure change. Of all of the SACO report recommendations, replacing MCAS Futenma with a sea-based facility poses the greatest challenge. Most of the other SACO report recommendations can be implemented with few problems.

## The United States Plans to Return Land Used on Okinawa

As called for in the SACO Final Report, the United States plans to return to Japan about 12,000 acres, or 21 percent of the total acreage, used by U.S. forces on 11 installations. The plan is to relocate personnel and facilities from bases to be closed to new bases or to consolidate them at the remaining bases. Table 3.1 shows the land to be returned, the planned return date, and the plan for replacing capabilities that would be lost through the land return.

**Table 3.1: Land to Be Returned to Japan Under SACO Recommendations**

Land return	Planned return date	Replacement facility
MCAS Futenma	Between 2001 and 2003	Sea-based facility
About 9,900 acres of the Northern Training Area	March 2003	Remaining Northern Training Area plus new acreage to be added by March 1998
Aha training area	March 1998	Acreage added to the Northern Training Area
Gimbaru training area	March 1998	Kin Blue Beach training area and Camp Hansen
Sobe communications site	March 2001	Camp Hansen
Yomitan auxiliary airfield	March 2001	Ie Jima auxiliary airfield
Most of Camp Kuwae	March 2008	Camp Zukeran and other facilities
Senaha communications station	March 2001	Torii communications station
Small portion of the Makiminato service area	Between 1998 and 2001	Remaining Makiminato service area and Kadena Air Base
Naha Port	No date established	Urasoe pier area
Housing consolidation on Camps Kuwae and Zukeran	March 2008	Remaining portions of Camps Kuwae and Zukeran

Sources: SACO Final Report; Marine Corps Bases, Japan; and the 18th Wing.

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The most significant land deal involves the planned closure and return of MCAS Futenma. The installation is a critical component of the Marine Corps' forward deployment because it is the home base of the 1st Marine Air Wing. The Wing's primary mission is to participate as the air component of the III Marine Expeditionary Force. The wing's Marine Air Group-36 provides tactical fixed and rotary wing aircraft and flies about 70 aircraft, including CH-46 and CH-53 helicopters and KC-130 aerial refueling airplanes.

MCAS Futenma's primary mission is to maintain and operate facilities and provide services and materials to support Marine aircraft operations. MCAS Futenma covers 1,188 acres of land and is completely surrounded by the urbanized growth of Ginowan City, as shown in figure 3.1.

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**Figure 3.1: Aerial View of MCAS Futenma**



Source: MCAS Futenma Master Plan.

Officials in the Office of the Secretary of Defense, USFJ, and Marine Corps Bases, Japan, told us that encroachment along the perimeter of MCAS Futenma is a concern. In fact, according to Marine Corps Bases, Japan, in one instance, the owner of land outside MCAS Futenma erected a building

at the end of the runway that was tall enough to create a hazard to aircraft using the base. The building was removed.

The land at MCAS Futenma is leased from about 2,000 private landowners by the government of Japan. About 40 percent of the base is used for runways, taxiways, and aircraft parking. The remaining portions of the base are used for air operations, personnel support facilities, housing, and administrative activities. MCAS Futenma has a runway and parallel taxiway that are 9,000 feet long as well as an aircraft washrack, maintenance facilities, vehicle maintenance facilities, fuel storage facilities, a hazardous waste storage and transfer facility, a control tower, an armory, and other facilities needed to operate a Marine Corps air station.

If the Marine Corps presence is to be maintained with air and ground combat units and logistical support collocated on Okinawa, then MCAS Futenma or a suitable replacement is required to maintain the operational capability of the III Marine Expeditionary Force's air combat element.

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## **MCAS Futenma Is Scheduled to Be Largely Replaced by a Sea-Based Facility**

The U.S. and Japanese governments established a working group to examine three options for replacing MCAS Futenma. The options were relocation of the air station onto (1) Kadena Air Base, (2) Camp Schwab, or (3) a sea-based facility to be located in the ocean offshore from Okinawa Island. The SACO Final Report stated that the sea-based facility was judged to be the best option to enhance the safety and quality of life of the Okinawan people and maintain the operational capabilities of U.S. forces. The report also cited as a benefit that a sea-based facility could be removed when no longer needed.

Acquisition of the sea-based facility would follow a process that began with the United States' establishing operational and quality-of-life requirements and would conclude with Japan's selecting, financing, designing, and building the sea-based facility to meet U.S. requirements. The government of Japan has decided to locate the sea-based facility offshore from Camp Schwab. However, at the time of our review some residents living near the proposed site had opposed having the sea-based facility near their community, but U.S. officials are proceeding on the basis that the facility will be built.

The Security Consultative Committee established the Futenma Implementation Group to identify a relocation site and an implementation plan for the transfer from MCAS Futenma to the sea-based facility. On the

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U.S. side, the Group is chaired by the Deputy Assistant Secretary of Defense for International Security Affairs and has representatives from the Joint Staff; the headquarters of the Marine Corps; the Assistant Secretary of the Navy for Installations and Environment; the Pacific Command; USFJ; the Office of Japanese Affairs, Department of State; and the Political-Military Affairs Section of the U.S. Embassy-Tokyo. The Group was established to oversee the design, construction, testing, and transfer of assets to the sea-based facility.

MCAS Futenma will not be closed until the sea-based facility is operational. Only when U.S. operating and support requirements have been met will Marine Air Group-36 and its rotary wing aircraft relocate to the sea-based facility. As part of the closure and return of MCAS Futenma, 12 KC-130 aircraft are scheduled to relocate to MCAS Iwakuni, on the Japanese mainland, after Japan builds new maintenance and other facilities to support the relocation. In addition, Japan is scheduled to build other support facilities at Kadena Air Base to support aircraft maintenance and logistics operations that are to relocate there. Ground elements of the 1st Marine Air Wing not relocated to the sea-based facility would relocate to other bases on Okinawa.

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**DOD Has Established Requirements for the Sea-Based Facility**

The sea-based facility is to be designed by Japan to meet U.S. operational requirements.

During regular operations, about 66 helicopters and MV-22 aircraft (when fielded) would be stationed aboard the sea-based facility. The MV-22 can operate in either vertical takeoff and landing mode, like a helicopter, or short takeoff and landing mode, like an airplane. The sea-based facility airfield requirements are based on MV-22 operating requirements. According to a Marine Corps study, a runway length of 2,600 feet is sufficient for normal day-to-day operations, training missions, and self-deployment to Korea in its vertical takeoff and landing mode under most conditions. The Pacific Command has established a 4,200-foot runway for all MV-22 operations based on aircraft performance and meteorological data. The Marine Corps study indicates that a 4,200-foot runway is sufficient for most training and mission requirements. However, the study also stated that for missions requiring an MV-22 gross weight near the maximum of 59,305 pounds, the aircraft would have to operate in its short takeoff mode and would require a runway of 5,112 feet under certain weather conditions.

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The United States has established a runway length requirement of about 4,200 feet for the sea-based facility. Arresting gear would be located about 1,200 feet from either end of the runway to permit carrier aircraft to land. In addition, the runway would have 328-foot overruns at each end to provide a safety margin in case a pilot overshoots the optimal landing spot during an approach and a parallel taxiway about 75 feet wide alongside the runway. Additional aircraft facilities include a drive-through rinse facility for aircraft corrosion control, an air traffic control tower, and aircraft firefighting and rescue facilities. Up to 10,000 pounds of ordnance would be stored in a magazine collocated with an ordnance assembly area aboard the sea-based facility. Also, flight simulators and security and rescue boat operations, among other capabilities, are required aboard the sea-based facility.

Aircraft maintenance would be performed aboard the sea-based facility. Marine Air Group-36 requires hangar space for five helicopter squadrons, including space for Marine Corps air logistics; corrosion control; aircraft maintenance; secure storage; administrative functions; ground support equipment; and engine test cells, among other facilities. Logistics operations requirements aboard the sea-based facility include aircraft supply and fuel/oil supply, spill response capability, and parking for up to 800 personally owned and government-owned vehicles. MCAS Futenma can store about 828,000 gallons of aircraft fuel. At the time of our review, the United States had not determined how much fuel storage capacity was needed, or how fuel is to be provided to support sea-based facility operations. Food service for about 1,400 on-duty servicemembers per meal would be required on the sea-based facility to provide meals during the day and for crews working nights.

The United States planned to locate the headquarters, logistics, and most operational activities aboard the sea-based facility and most quality-of-life activities, including housing, food service, and medical and dental services, ashore at Camp Schwab. U.S. officials estimate that over 2,500 servicemembers currently stationed at MCAS Futenma would transfer to the sea-based facility and Camp Schwab. To accommodate the incoming arrivals from MCAS Futenma, Marine Corps Bases, Japan, plans to relocate about 800 to 1,000 servicemembers currently housed at Camp Schwab to Camp Hansen and absorb the remainder at Camp Schwab. U.S. engineers estimated that about 1,900 people would work on the sea-based facility.

Due to a lack of DOD dependent schools in the Camp Schwab area, only unmarried servicemembers will be housed at Camp Schwab.

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Servicemembers accompanied by dependents will be housed where most of them and most of the DOD schools (including the only two high schools) are located now, although not on MCAS Futenma. Marine Corps Bases, Japan, would have to either house all incoming servicemembers on or near Camp Schwab and bus their dependent children to the schools or keep servicemembers who have dependents housed in the southern part of the island and have them commute to work. Marine Corps Bases, Japan, chose the latter.

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**Contractors Have Developed Three Concepts for a Sea-Based Facility**

Japan will design, build, and pay for the sea-based facility and plans to locate it offshore from Camp Schwab. The sea-based facility is to be provided rent-free to USFJ, which would then provide it to the 1st Marine Air Wing. Government of Japan, ocean engineering and other university professors, and other experts have concluded that three types of sea-based facilities are technically feasible—the pontoon-type, pile-supported-type, or semisubmersible-type.

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**Pontoon-Type Sea-Based Facility**

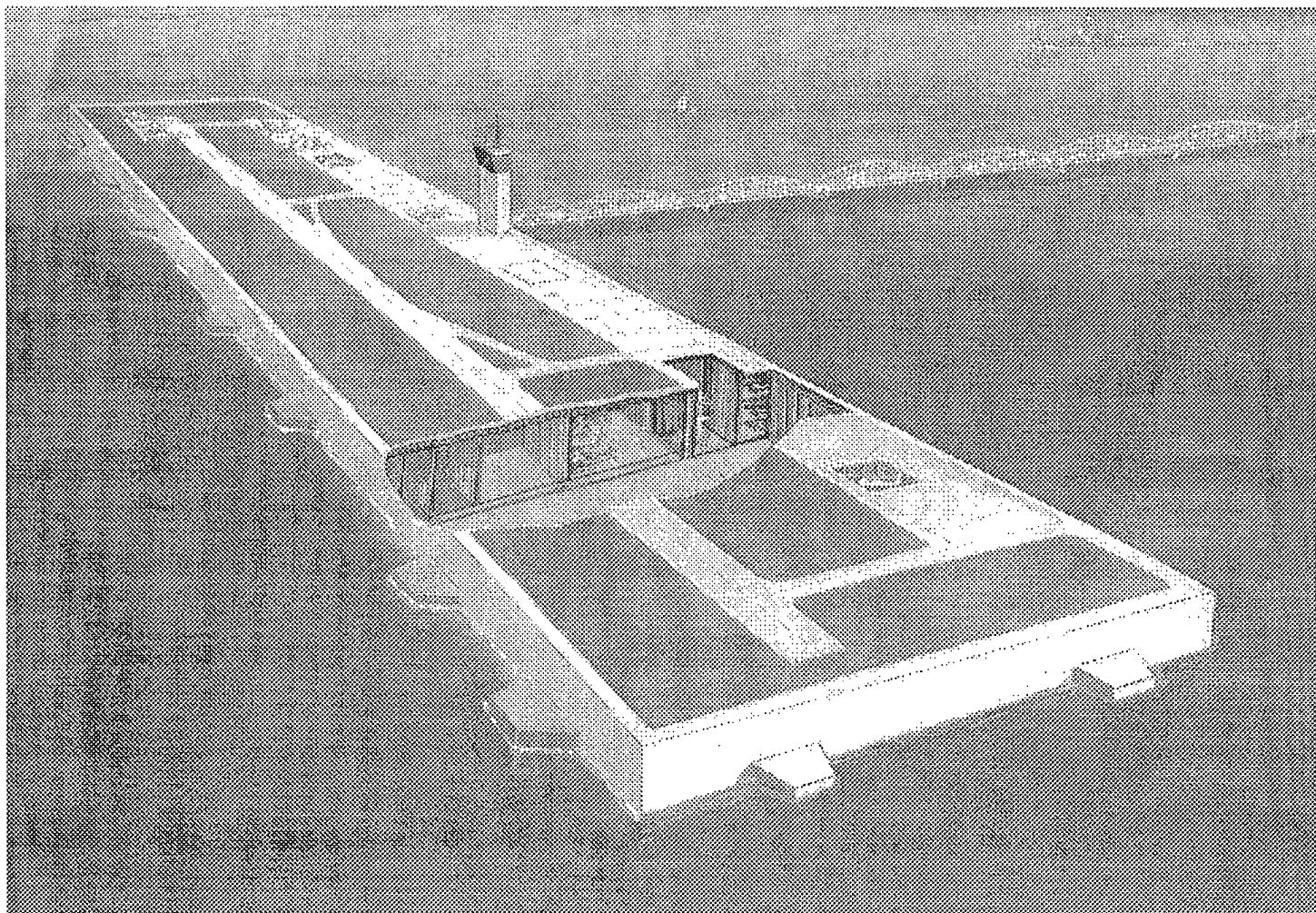
A pontoon-type sea-based facility would essentially be a large platform that would float in the water on pontoons (see fig. 3.2). The structure would be located about 3,000 feet from shore in about 100 feet of water. Part of the platform would be below the water line. To keep the sea relatively calm around the platform, a breakwater would be installed to absorb the wave action. The breakwater would be constructed in about 60 feet of water atop a coral ridge. To prevent the structure from floating away, it would be attached to a mooring system attached to the sea floor.

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**Figure 3.2: Artist's Conception of a Pontoon-Type Sea-Based Facility With a Cut-Away to Show the Lower Deck**



Source: Office of the Secretary of Defense, International Security Affairs.

The pontoon-type sea-based facility envisioned would have a runway and control tower on the deck and most maintenance, storage, and personnel support activities (such as food service) below deck. According to documents that we obtained, no floating structure of the size required has ever been built. In addition, Naval Facilities Engineering Command

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officials told us that construction of a breakwater in about 60 feet of water would be "at the edge of technical feasibility."

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**Pile-Supported Sea-Based Facility**

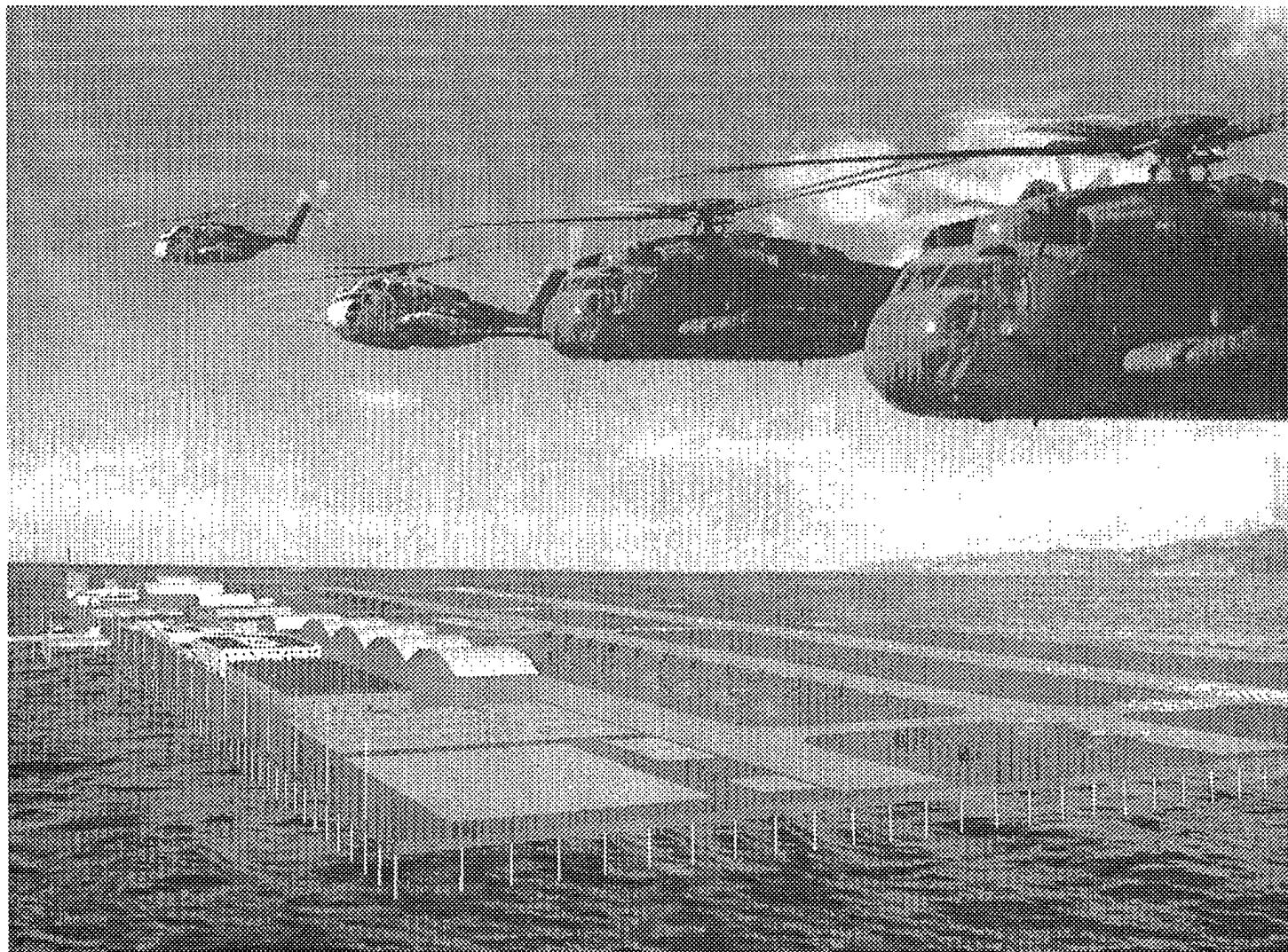
A pile-supported sea-based facility essentially would be a large platform supported by columns, or piles, driven into the sea floor (see fig. 3.3). The structure would be located in about 16 feet to 82 feet of water and relatively closer to shore than the proposed pontoon-type sea-based facility. According to Naval Engineers, about 7,000 piles would be needed to support a structure of the size proposed.

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**Figure 3.3: Artist's Conception of a Pile-Supported Sea-Based Facility**



Source: Office of the Secretary of Defense, International Security Affairs.

The pile-supported sea-based facility envisioned would have one deck. In addition to the runway and control tower, maintenance, storage, and personnel support activities would be in buildings on the deck. Structures

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similar to the pile-supported sea-based facility have already been built for other purposes.

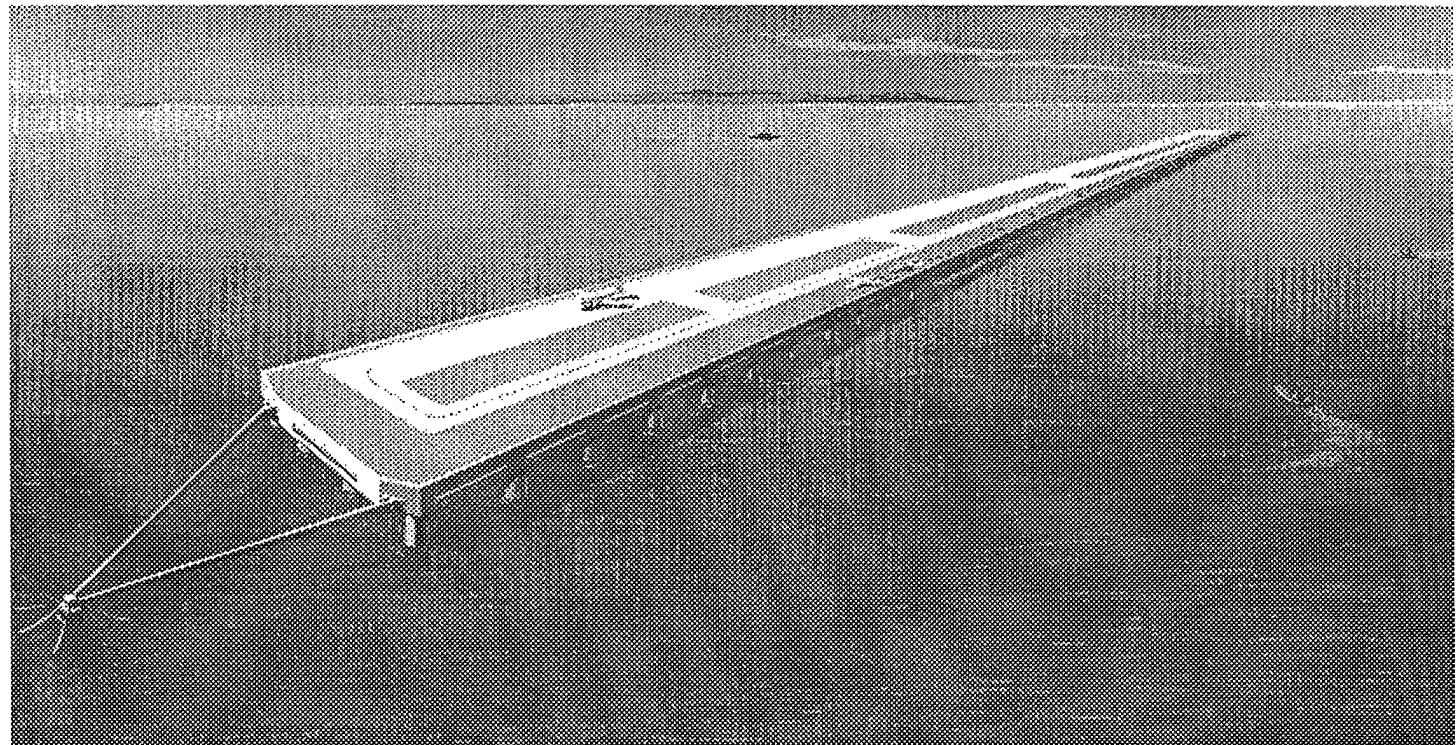
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**Semisubmersible-Type  
Sea-Based Facility**

The semisubmersible-type sea-based facility would consist of a platform above the water line supported by a series of floating underwater hulls (see fig. 3.4). The facility would have interconnected modules with a runway and control tower atop the deck and maintenance, storage, and other functions on a lower deck.

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**Figure 3.4: Artist's Conception of a Semisubmersible Sea-Based Facility**



Source: Office of the Secretary of Defense, International Security Affairs.

The semisubmersible sea-based facility relies on technology that does not yet exist, according to documents provided by DOD. For example,

documents indicate that semisubmersible sea-based facilities are limited by current technology to about 1,000 feet in length.

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## **Costs, Challenges, and Complications Threaten Capability of the Sea-Based Facility**

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### **Costs**

The United States and/or Japan are likely to encounter high costs, technological challenges, and operational complications in designing, constructing, and operating the sea-based facility.

The sea-based facility is estimated to cost Japan between \$2.4 billion and \$4.9 billion to design and build. Operations and support costs are expected to be much higher on the sea-based facility than at MCAS Futenma. Under the Status of Forces Agreement, the United States pays for the maintenance of bases it uses in Japan. Based on a \$4-billion sea-based facility design and construction cost, U.S. engineers have initially estimated maintenance costs to be about \$8 billion over the 40-year life span of the facility. Thus, annual maintenance would cost about \$200 million, compared with about \$2.8 million spent at MCAS Futenma. At the time of this report, the United States and Japan were discussing having Japan pay for maintenance on the sea-based facility. If Japan does not pay maintenance costs, then the U.S. cost related to the SACO recommendations could be much higher.

In addition to potential increased maintenance costs, the United States may spend money to renovate facilities at MCAS Futenma previously identified by both the U.S. and Japanese governments for replacement by Japan. Because of the planned closure of MCAS Futenma, the government of Japan cancelled about \$140 million worth of projects at the air station that were to be funded under Japan's Facilities Improvement Program. The United States believes these facilities are important to Futenma's operations until the sea-based facility is ready. Marine Forces, Japan, has requested \$13.6 million in U.S. funds to complete some of those projects. During the 10-year sea-based facility acquisition period, some of the other projects may be needed to continue to operate MCAS Futenma. If the government of Japan does not fund these projects for MCAS Futenma, the United States will have to choose between the added risk of operating from decaying facilities or pay additional renovation costs at a base scheduled for closure.

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## Technological Challenges

Technological challenges may arise because no sea-based facility of the type and scale envisioned has ever been built to serve as an air base. To address these challenges and develop sea-based facility operational and support requirements, the Naval Facilities Engineering Command convened a working group in August 1997. In its report, the group concluded that for the three sea-based facilities being considered, "none of these technologies has been demonstrated to the scale envisioned."

The report described numerous challenges that would have to be overcome to make a sea-based facility viable. For example, the sea-based facility would have to survive natural events such as typhoons, which strike within 180 nautical miles of Okinawa Island an average of four times per year. During a typhoon, personnel would evacuate the sea-based facility, but the aircraft would remain aboard the facility in hangars to ride out the storm, according to 1st Marine Air Wing officials. U.S. engineers we spoke with indicated that a pile-supported sea-based facility's underside would have to withstand pressure caused by storm-tossed waves slamming beneath the deck, and the pontoon- and semisubmersible-type sea-based facilities must be designed to avoid instability or sinking. Tsunamis are also a threat. In a tsunami, the water level near shore generally drops (sometimes substantially) and then rises to great heights, causing large, destructive waves. U.S. engineers we spoke with indicated that a floating sea-based facility's mooring system would have to permit the floating structure to drop with the water level without hitting bottom and then rise as the waves returned.

Also, structural issues pose technological challenges. The sea-based facility would have to be invulnerable to sinking or capsizing and resume normal operations within 24 to 48 hours after an aircraft crash, an accident involving ordnance aboard the facility, or an attack in wartime or by terrorists. An issue involving the pontoon and semisubmersible facilities is the potential for them to become unstable if an interior compartment is flooded. Thus, watertight doors and compartments (similar to those on ships) may be required. Corrosion control is a major concern because the facility would always be in salt water. Therefore, that part of the structure below the waterline would have to be built to minimize or resist corrosion for the 40-year life span of the facility, or a method of identifying and repairing corrosion (possibly underwater) without disrupting military operations would have to be devised.

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## **Operational Complications**

The Marine Corps may experience operational complications because the proposed length of the sea-based facility runway can compromise safety margins when an MV-22 aircraft is taking off at maximum weight under wet runway conditions.<sup>1</sup> Since the MV-22 requires a 5,112-foot runway to take off at its maximum weight of 59,305 pounds and maintain maximum safety margins on a wet runway, the proposed 4,200-foot runway for the sea-based facility is too short. While the MV-22 can take off from a 4,200-foot runway at its maximum weight, in the event of an engine failure, or other emergency, on a wet runway, the safety margin is reduced. This risks the loss of the aircraft because the stopping distance for an aborted takeoff is longer on a wet runway than the runway planned. According to the Pacific Command, conditions that require more than 4,200 feet for takeoff would not preclude effective MV-22 contingency missions. A commander would need to make a decision to accept the increased risk of aircraft loss based on the criticality of the mission, or to reduce the aircraft's load. The Pacific Command considers the risk acceptable and accepted the reduced the size of the sea-based facility.

Alternatively, with a reduced load, MV-22s could take off from the sea-based facility without a full fuel load, use Kadena Air Base to finish fueling to capacity, and take off from its longer runway to continue the mission. However, this requires Kadena Air Base to absorb increased air traffic and risks later arrival in an area of operations. Ultimately, the added risk, time, and coordination are problems that would not occur at MCAS Futenma because its 9,000-foot runway is long enough for all MV-22 missions. Also, if Kadena Air Base is not available for MV-22 operations, the Marines would have no alternative U.S. military runway of sufficient length on Okinawa to support MV-22 missions at its maximum weight and maintain maximum safety margins in certain weather conditions.

Moreover, the loss of MCAS Futenma's runway equates to the loss of an emergency landing strip for fixed-wing aircraft in the area. However, safety margins may not be compromised even if Kadena Air Base is shut down (for weather or other reasons), MCAS Futenma is closed, and the sea-based facility's runway as currently designed is too short for certain aircraft, because Naha International Airport would be available as an emergency landing strip for U.S. military aircraft.

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## **U.S. Project Oversight Is Currently Limited**

USFJ and Naval Facilities Engineering Command officials told us that the United States must oversee the design, engineering, and construction of

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<sup>1</sup>According to the Pacific Command, Okinawa experiences rainfall an average of 135 days a year.

the sea-based facility to ensure that it meets U.S. requirements, is operationally adequate, and is affordable to operate and maintain. However, current staff and funding resources are dedicated to managing other programs associated with the U.S. presence in Japan. Therefore, USFJ has requested establishment of a Project Management Office to oversee and coordinate SACO implementation while the Naval Facilities Engineering Command has asked for funding for a special project office to oversee the design and construction of the sea-based facility.

In addition to the high cost, technological challenges, and operational complications that stem from the planned sea-based facility and limited U.S. oversight of the project, Japan's sea-based facility acquisition strategy compounds the risk. At the time of our review, Japan did not have a risk-reduction phase planned to demonstrate that the design of the sea-based facility meets U.S. operating and affordability requirements. A risk-reduction phase could include risk assessments, life-cycle cost analyses, and design tradeoffs. DOD's policy is to include a risk-reduction phase in its acquisition of major systems. U.S. officials believe it will take up to 10 years to design, build, and relocate to the sea-based facility as compared with the 5 to 7 years estimated in the SACO Final Report. On the other hand, these officials also believe that adding time to the project is a price worth paying to include a risk-reduction phase. Given the scope, technical challenges, and unique nature of the sea-based facility, including a risk-reduction phase would permit the U.S. and Japanese governments to establish that the proposed sea-based facility will be affordable and operationally suitable. The inclusion of a risk-reduction phase in the sea-based facility's acquisition schedule is currently being discussed between the U.S. and Japanese governments.

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## **Problems Associated With Remaining 10 Land Return Recommendations Are Minimal, and Some Benefits Are Likely**

U.S. forces on Okinawa will face minimal risks to operations from the remaining 10 land return issues. The services can maintain training opportunities and deployment plans and schedules, because land to be returned is no longer needed or will be returned only after Japan provides adequate replacement facilities on existing bases or adds land by extending other base boundaries.

First, while the Northern Training Area is still used extensively for combat skills training, about 9,900 acres can be returned to Japan because that land is no longer needed by the United States. The Marine Corps will retain about 9,400 acres of the Northern Training Area and expects to be able to continue all needed training on the remaining acreage. The return

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of the 9,900 acres is contingent on Japan's relocating helicopter landing zones within what will remain of the Northern Training Area. In addition, the adjacent Aha training area can be returned without risk once Japan provides new shoreline access to the Northern Training Area to replace what would be lost by the closure and return of the Aha training area. Likewise, return of the Gimbaru training area presents low risk because the helicopter landing zone is to be relocated to the nearby Kin Blue Beach training area and the vehicle washrack and firefighting training tower will be relocated to Camp Hansen. The Yomitan auxiliary airfield can be returned because parachute drop training conducted there has already been transferred to the Ie Jima auxiliary airfield on Ie Jima Island, just off the northwest coast of Okinawa Island. Lastly, the Sobe communication station can be returned because it will be relocated to the remaining Northern Training Area, and Naha Port can be returned when it is replaced by a suitable facility elsewhere on Okinawa.

While risks from the return of land (other than that related to MCAS Futenma) are minimal, the United States expects some benefits from the consolidation of housing on the remaining portion of Camp Zukeran. First, the SACO Final Report calls on Japan to build a new naval hospital on Camp Zukeran to replace the existing hospital on that part of Camp Kuwae scheduled for return. Marine Corps Bases, Japan estimated the construction cost to be about \$300 million, which Japan is scheduled to pay. In addition, Japan is to provide 2,041 new or reconstructed housing units at Camp Zukeran as part of the SACO process and another 1,473 reconstructed housing units at Kadena Air Base, which is not part of SACO's recommendations. Air Force 18th Wing civil engineering officials estimated the total housing construction cost at about \$2 billion.<sup>2</sup> The 18th Wing has requested establishment of a special project office to help with the design of the housing units and to ensure that the units meet U.S. health and safety code standards.

The current estimated cost to the United States to implement the recommendations related to the return of land is about \$193.5 million over about 10 years. This includes (1) \$80 million to furnish the new hospital; (2) \$71 million for the Futenma Implementation Group; (3) \$8.2 million to furnish 2,041 housing units; (4) \$8.1 million for USFJ to oversee and coordinate SACO implementation; (5) \$8 million for the Naval Facilities Engineering Command project office to oversee the sea-based facility's engineering and construction; (6) \$4.4 million for a special project office for oversight of the housing project and master plan; and (7) \$13.6 million

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<sup>2</sup>The Air Force is DOD's executive agent for housing in Japan.

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for MCAS Futenma projects that would have been paid for by Japan had it not cancelled funding for the base. DOD officials told us that the U.S. and Japanese governments were negotiating an arrangement whereby Japan might assume those portions of the \$71 million in costs which they can pay (and still comply with their domestic laws), for the Futenma Implementation Group. This arrangement could reduce U.S. costs below the current estimate of \$193.5 million. Also, some initial costs may be offset in later years because the 18th Wing expects maintenance costs will be lower at the new hospital and housing. However, U. S. costs could be significantly higher than the \$193.5 million estimate because the United States and Japan have not agreed on which country would be responsible for the sea-based facility's maintenance.

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## Some Problems and Risks in Implementing One of the Three Operational Changes

The United States has already implemented all three changes in training and operational procedures called for in the SACO Final Report (see table 3.2).

**Table 3.2: Training and Operational Procedures Changes Addressed in the SACO Final Report**

<b>Operational procedure change</b>	<b>How operational procedures will be maintained</b>
End artillery live-fire training over highway 104	Relocate training to ranges on Japan's mainland
Relocate parachute drop training to Ie Jima auxiliary airfield	End parachute drop training at Yomitan auxiliary airfield and relocate to Ie Jima auxiliary airfield.
End conditioning hikes on public roads	Relocate training onto U.S. bases

Sources: SACO Final Report and Marine Corps Bases, Japan.

The 3rd Marine Division's artillery live-fire exercises have been relocated from the Central Training Area on Okinawa to the Kita-Fuji, Higashi-Fuji, Ojojihara, Yausubetsu, and Hijudai training ranges on the Japanese mainland. Prior to the SACO Final Report, the 3rd Marine Division was already conducting 60 to 80 days of artillery live-fire exercises at the two Fuji ranges. Under the SACO relocation, another 35 days of training will be split among the five ranges. Japan has agreed to pay transportation costs

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to the artillery ranges and wants to use Japanese commercial airliners for this purpose.

The III Marine Expeditionary Force believes the training at the five ranges is comparable to that available on Okinawa and other ranges in the United States. At the time of our review, the Marine Corps had successfully completed one relocated artillery live-fire exercise each at the Kita-Fuji and Yausubetsu ranges. The relocation has had virtually no impact on deployment plans and schedules, according to III Marine Expeditionary Force officials.

In addition to the artillery training relocation, the United States has transferred parachute jump training conducted by the Army's 1st Battalion, 1st Special Forces Group (Airborne), from the Yomitan auxiliary airfield (which was closed) to the auxiliary airfield on Ie Jima Island, just off the northwest coast of Okinawa.<sup>3</sup> However, special forces soldiers are at increased risk of failing to maintain airborne qualifications because parachute operations training has proven more difficult to complete on Ie Jima Island. About 73 percent of the training jumps scheduled between July 1996 and September 1997 on Ie Jima Island were canceled due to adverse weather at the drop zone; adverse weather at sea, preventing required safety boats from standing by in the event a parachutist landed in the water; and equipment problems that prevented the safety boats from departing their berths. The relocation has not affected operational deployments and schedules, although training deployments have been disrupted.

Lastly, the Marine Corps has already ended conditioning hikes for troops on public roads off base and transferred those hikes to roads within U.S. bases. USFJ and Marine Corps Bases, Japan, indicated that this has not cost the United States any money and has had no impact on operational capability, deployment plans and schedules, or training.

As requested, we also reviewed the impact of the SACO Final Report recommendations on bomber operations in the Pacific, although bomber operations were not specifically addressed by the SACO report. According to the headquarters of the Air Force, Pacific Air Forces, and 18th Wing, the SACO Final Report recommendations will have no impact on bomber operations in the Pacific.

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<sup>3</sup>The Yomitan auxiliary airfield has been closed but is not scheduled for return to Japan until March 2001.

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## Risks Are Minimal From Five Noise Reduction Initiatives

The United States has implemented two noise reduction initiatives at Kadena Air Base and MCAS Futenma called for in the SACO Final Report. Three more noise reduction initiatives are to be implemented after Japan constructs new facilities. Table 3.3 shows the status of the five noise reduction initiatives and U.S. plans for maintaining training and operational capability after their implementation.

**Table 3.3: Noise Reduction Initiatives  
Called for in the SACO Final Report**

<b>Noise reduction initiative</b>	<b>Implementation date</b>	<b>How training and operational procedures are to be maintained</b>
Aircraft noise countermeasures at Kadena Air Base and MCAS Futenma	Implemented	All flights required to do missions and maintain aircrew proficiency are permitted, even at night.
Transfer KC-130 and AV-8 aircraft	Partially implemented	Japan will build replacement facilities at MCAS Iwakuni for the KC-130s; all but 6 AV-8s have returned to the United States. <sup>a</sup>
Relocate Navy aircraft and MC-130 operations within Kadena Air Base	Partially implemented	Japan will build facilities at Kadena Air Base.
Noise reduction baffles at Kadena Air Base	March 1998	Japan will build noise reduction baffles.
Limitations on nighttime training operations at MCAS Futenma	Implemented	Nighttime flying is still permitted for training.

<sup>a</sup>These aircraft are now based at MCAS Iwakuni and frequently deploy to Kadena Air Base.

Sources: SACO Final Report; Marine Corps Bases, Japan; and the 18th Wing.

The United States will encounter few problems from the noise abatement procedures, according to USFJ; Marine Corps Bases, Japan; and the 18th Wing. Commanders at MCAS Futenma and Kadena Air Base retain the right to order nighttime flying operations to maintain aircrew proficiency and meet all training, mission, and safety requirements. In fact, the noise abatement countermeasures have been in effect since March 1996, and commanders at both installations indicated that the procedures have not affected operational capability, deployment plans and schedules, or training.

## Risks Are Minimal From Eight Status of Forces Agreement Changes

The United States has implemented seven of the eight changes to Status of Forces Agreement procedures called for in the SACO Final Report. Table 3.4 shows the new Status of Forces Agreement procedures.

**Table 3.4: Improvements to Status of Forces Agreement Procedures**

<b>Improve Status of Forces Agreement procedures</b>
Provide timely reports on U.S. military accidents to authorities in Japan.
Provide greater public exposure of Joint Committee agreements.
Implement new procedures to authorize visits to U.S. facilities by Japanese nationals. <sup>a</sup>
Attach new number plates to all U.S. force official vehicles, including tactical vehicles.
Advise U.S. personnel to purchase supplemental automobile insurance for personally owned vehicles. <sup>b</sup>
Japan will try to pay the difference between Japanese court judgments and the amount that the United States is willing to pay to compensate for claims against U.S. military personnel not involved in the performance of official duties. <sup>c</sup>
Implement new quarantine procedures for pets brought to Japan by U.S. personnel.
Continue to use procedures already in place for removal of unexploded ordnance at the Central Training Area. These procedures are equivalent to those used in the United States.

<sup>a</sup>Some Japanese nationals visit U.S. bases to view land that they own within the base and because some ancient cultural assets are located within some U.S. bases.

<sup>b</sup>USFJ went beyond the SACO report goal and now requires U.S. personnel to buy supplemental insurance for their personally owned vehicles.

<sup>c</sup>Japan is scheduled to implement these procedures by March 1998.

Sources: SACO Final Report; USFJ; and Marine Corps Bases, Japan.

According to USFJ officials, with the exception of affixing number plates to official vehicles, the changes in Status of Forces Agreement procedures cost the United States nothing and had no impact on deployment plans, schedules, and training. The number plates cost about \$30,000 according to USFJ officials.

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## Recommendations

We recommend that the Secretary of Defense

- decide on the means to monitor the design, engineering, and construction of the sea-based facility;
- work with Japan to include a risk-reduction phase in the acquisition schedule to establish that the designed sea-based facility will be affordable and operationally suitable;
- take steps to ensure that all U.S. concerns, especially the costs of operations and maintenance on the sea-based facility and operational concerns, have been satisfactorily addressed before Japan begins to build the sea-based facility; and
- request the Japanese government to allocate funds for those projects at Futenma that were cancelled by Japan due to the planned closure of Futenma and are deemed essential to continued operations of the station and the 1st Marine Air Wing until completion of the replacement facility.

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## Agency Comments

In written comments on a draft of this report, DOD concurred with GAO's recommendations and noted that the report effectively outlines the major operational and technical issues involved in realigning, consolidating, and reducing U.S. force presence on Okinawa, as set forth in the SACO process. DOD also noted that the role of Congress will be critical in maintaining the strategic relationship with Japan and therefore the GAO report was timely and welcome. DOD provided technical comments, which we have incorporated in our report where appropriate. The DOD response is printed in its entirety in appendix II.

We also provided a copy of our draft report to the Department of State. In oral comments, the Department of State concurred with our report and offered one technical change which we incorporated into the report.

# Two Environmental Issues Could Arise From Implementing the SACO Recommendations

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It may take a decade or more to fully achieve all of the SACO's recommendations, but two environmental issues may arise and remain during and after implementation. The first concerns the potential for environmental contamination on U.S. bases scheduled for closure. The second concerns the potential adverse impact on the environment from construction and operation of the sea-based facility.

## Environmental Cleanup Issues Could Affect Land Return

If environmental contamination is found on bases to be closed under the SACO process, cleanup could be expensive. As we noted in chapter 1, the Status of Forces Agreement does not require the United States to return bases in Japan to the condition they were in at the time they were provided to U.S. forces or to compensate Japan for not having done so. Thus, USFJ and Marine Corps Bases, Japan, officials believe that the United States is not obligated to do environmental cleanup at bases to be closed. Nevertheless, a 1995 DOD policy calls for the removal of known imminent and substantial dangers to health and safety due to environmental contamination caused by DOD operations on installations or facilities designated for return to the host nation overseas. Furthermore, if the bases are closed and the land returned to Japan and environmental contamination is subsequently found, redevelopment and reuse efforts planned for some of these facilities could be hampered. In fact, Marine Corps Bases, Japan, and other Okinawa-based U.S. forces were informed by a letter dated August 25, 1997, from the government of Japan's Naha Defense Facilities Administration Bureau that the toxic substances mercury and polychlorinated biphenyls were found on the Onna communications site. The United States had closed the base and returned the land to Japan in November 1995 (a land return unrelated to the SACO process). The letter indicated that the presence of these substances has prevented the land from being returned to its owners and thus being available for reuse. The letter concludes by requesting that the United States conduct a survey, identify any contamination that may exist, and clean up bases scheduled for closure in the future. If the United States agrees to this request, land return under the SACO process could be affected. At the time of our review, the United States had not responded to the letter.

If such a survey, sometimes called an environmental baseline survey, is conducted and contamination is found, cleanup could prove expensive. For example, environmental remediation at MCAS Tustin in California is expected to cost more than \$53 million when completed. If a survey is

conducted and contamination is found, a decision would be needed as to whether the United States or Japan would pay the cost.

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## **Construction and Operation of the Sea-Based Facility Could Harm the Environment**

DOD's position is that the sea-based facility should be constructed and operated in a manner that preserves and protects the natural resources of Okinawa, including the ocean environment and coral reefs that partially surround the island. Further, the United States and Japan, along with a substantial number of other countries, support an international coral reef initiative aimed at conservation and management of coral reefs and related ecosystems. Coral reefs are in the area in which the sea-based facility is tentatively to be located. However, two sea-based facility options currently under consideration have the potential to harm the coral reefs. The pontoon-type facility requires the installation of a large breakwater and several mooring stations onto the seafloor. The pile-supported facility requires several thousand support pilings that would need to be driven into the coral reef or seafloor and reinforced to withstand storm conditions. Both of these options require at least one, and possibly two, causeways connecting them to shore facilities. Numerous scientific studies show that large construction projects can cause damage to coral reefs and the nearby coastal areas. The government of Japan is evaluating the condition of the coral reef.

The environment could also be contaminated through routine operations aboard the sea-based facility. The accidental runoff of cleaning fluids used to wash aircraft or unintentional fuel system leaks could contaminate the nearby ocean environment.



# The Final Report of the Special Action Committee on Okinawa

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The SACO Final Report, December 2, 1996, by Minister for Foreign Affairs Ikeda, Minister of State for Defense Kyuma, Secretary of Defense Perry, Ambassador Mondale

The Special Action Committee on Okinawa (SACO) was established in November 1995 by the Governments of Japan and the United States. The two Governments launched the SACO process to reduce the burden on the people of Okinawa and thereby strengthen the Japan-US alliance.

The mandate and guidelines for the SACO process were set forth by the Governments of Japan and the United States at the outset of the joint endeavor. Both sides decided that the SACO would develop recommendations for the Security Consultative Committee (SCC) on ways to realign, consolidate and reduce US facilities and areas, and adjust operational procedures of US forces in Okinawa consistent with their respective obligations under the Treaty of Mutual Cooperation and Security and other related agreements. The work of the SACO was scheduled to conclude after one year.

The SCC which was held on April 15, 1996, approved the SACO Interim Report which included several significant initiatives, and instructed the SACO to complete and recommend plans with concrete implementation schedules by November 1996.

The SACO, together with the Joint Committee, has conducted a series of intensive and detailed discussions and developed concrete plans and measures to implement the recommendations set forth in the Interim Report.

Today, at the SCC, Minister Ikeda, Minister Kyuma, Secretary Perry and Ambassador Mondale approved this SACO Final Report. The plans and measures included in this Final Report, when implemented, will reduce the impact of the activities of US forces on communities in Okinawa. At the same time, these measures will fully maintain the capabilities and readiness of US forces in Japan while addressing security and force protection requirements. Approximately 21 percent of the total acreage of the US facilities and areas in Okinawa excluding joint use facilities and areas (approx. 5,002 ha/12,361 acres) will be returned.

Upon approving the Final Report, the members of the SCC welcomed the successful conclusion of the year-long SACO process and underscored their strong resolve to continue joint efforts to ensure steady and prompt

implementation of the plans and measures of the SACO Final Report. With this understanding, the scc designated the Joint Committee as the primary forum for bilateral coordination in the implementation phase, where specific conditions for the completion of each item will be addressed. Coordination with local communities will take place as necessary.

The scc also reaffirmed the commitment of the two governments to make every endeavor to deal with various issues related to the presence and status of US forces, and to enhance mutual understanding between US forces and local Japanese communities. In this respect, the scc agreed that efforts to these ends should continue, primarily through coordination at the Joint Committee.

The members of the scc agreed that the scc itself and the Security Sub-Committee (ssc) would monitor such coordination at the Joint Committee as described above and provide guidance as appropriate. The scc also instructed the ssc to seriously address the Okinawa-related issues as one of the most important subjects and regularly report back to the scc on this subject.

In accordance with the April 1996 Japan-US Joint Declaration on Security, the scc emphasized the importance of close consultation on the international situation, defense policies and military postures, bilateral policy coordination and efforts towards a more peaceful and stable security environment in the Asia-Pacific region. The scc instructed the ssc to pursue these goals and to address the Okinawa-related issues at the same time.

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## Return Land

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Futenma Air Station	See attached (p. 56).
Northern Training Area	Return major portion of the Northern Training Area (approx. 3,987 ha/9,852 acres) and release US joint use of certain reservoirs (approx. 159 ha/393 acres) with the intention to finish the process by the end of March 2003 under the following conditions:  Provide land area (approx. 38 ha/93 acres) and water area (approx. 121ha/298 acres) with the intention to finish the process by the end of

March 1998 in order to ensure access from the remaining Northern Training Area to the ocean.

Relocate helicopter landing zones from the areas to be returned to the remaining Northern Training Area.

<b>Aha Training Area</b>	Release US joint use of Aha Training Area (approx. 480 ha/1,185 acres) and release US joint use of the water area (approx. 7,895 ha/19,509 acres) with the intention to finish the process by the end of March 1998 after land and water access areas from the Northern Training Area to the ocean are provided.
<b>Gimbaru Training Area</b>	Return Gimbaru Training Area (approx. 60 ha/149 acres) with the intention to finish the process by the end of March 1998 after the helicopter landing zone is relocated to Kin Blue Beach Training Area, and the other facilities are relocated to Camp Hansen.
<b>Sobe Communication Site</b>	Return Sobe Communication Site (approx. 53 ha/132 acres) with the intention to finish the process by the end of March 2001 after the antenna facilities and associated support facilities are relocated to Camp Hansen.
<b>Yomitan Auxiliary Airfield</b>	Return Yomitan Auxiliary Airfield (approx. 191 ha/471 acres) with the intention to finish the process by the end of March 2001 after the parachute drop training is relocated to Ie Jima Auxiliary Airfield and Sobe Communications Sites is relocated.
<b>Camp Kuwae</b>	Return most of Camp Kuwae (approx 99 ha/245 acres) with the intention to finish the process by the end of March 2008 after the Naval Hospital is relocated to Camp Zukeran and remaining facilities there are relocated to Camp Zukeran or other facilities and areas in Okinawa.
<b>Senaha Communication Station</b>	Return Senaha Communication Station (approx. 61 ha/151 acres) with the intention to finish the process by the end of March 2001 after the antenna facilities and associated support facilities are relocated to Torii Communication Station. However, the microwave tower portion (approx.- 0.1 ha/0.3 acres) will be retained.

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<b>Makiminato Service Area</b>	Return land adjacent to Route 58 (approx. 3 ha/8 acres) in order to widen the Route, after the facilities which will be affected by the return are relocated within the remaining Makiminato Service Area.
<b>Naha Port</b>	Jointly continue best efforts to accelerate the return of Naha Port (approx. 57 ha/140 acres) in connection to its relocation to the Urasoe Pier area (approx. 35 ha/87 acres).
<b>Housing Consolidation (Camp Kuwae and Camp Zukeran)</b>	Consolidate US housing areas in Camp Kuwae and Camp Zukeran and return portions of land in housing areas there with the intention to finish the process by the end of March 2008 (approx. 83 ha/206 acres at Camp Zukeran; in addition, approx. 35 ha/85 acres at Camp Kuwae will be returned through housing consolidation. That land amount is included in the above entry on Camp Kuwae.
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<b>Adjust Training and Operational Procedures</b>	
<b>Artillery Live-Fire Training Over Highway 104</b>	Terminate artillery fire-training over Highway 104, with the exception of artillery fire required in the event of a crisis, after the training is relocated to maneuver areas on the mainland of Japan within Japanese Fiscal Year 1997.
<b>Parachute Drop Training</b>	Relocate parachute drop training to Ie Jima Auxiliary Airfield.
<b>Conditioning Hikes on Public Roads</b>	Conditioning hikes on public roads have been terminated.

## **Implement Noise Reduction Initiatives:**

<b>Aircraft Noise Abatement Countermeasures at Kadena Air Base and Futenma Air Station</b>	Agreements on aircraft noise abatement countermeasures at Kadena Air Base and Futenma Air Station announced by the Joint Committee in March 1996 have been implemented.
<b>Transfer of KC-130 Hercules Aircraft and AV-8 Harrier Aircraft</b>	Transfer 12 KC-130 aircraft currently based at Futenma Air Station to Iwakuni Air Base after adequate facilities are provided. Transfer of 14 AV-8 aircraft from Iwakuni Air Base to the United States has been completed.
<b>Relocation of Navy Aircraft and MC-130 Operations at Kadena Air Base</b>	Relocate Navy aircraft operations and supporting facilities at Kadena Air Base from the Navy ramp to other side of the major runways. The implementation schedules for these measures will be decided along with the implementation schedules for the development of additional facilities at Kadena Air Base necessary for the return of Futenma Air Station. Move the MC-130s at Kadena Air Base from the Navy ramp to the northwest corner of the major runways by the end of December 1996.
<b>Noise Reduction Baffles at Kadena Air Base</b>	Build new noise reduction baffles at the north side of Kadena Air Base with the intention to finish the process by the end of March 1998.
<b>Limitation of Night Flight Training Operations at Futenma Air Station</b>	Limit night flight training operations at Futenma Air Station to the maximum extent possible, consistent with the operational readiness of US forces.
<b>Improve Status of Forces Agreement Procedures</b>	
<b>Accident Reports</b>	Implement new Joint Committee agreement on procedures to provide investigation reports on US military aircraft accidents announced on December 2, 1996.

In addition, as part of the US forces' good neighbor policy, every effort will be made to insure timely notification of appropriate local officials, as well as the Government of Japan, of all major accidents involving US forces' assets or facilities.

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<b>Public Exposure of Joint Committee Agreements</b>	Seek greater public exposure of Joint Committee agreements.
<b>Visits to US Facilities and Areas</b>	Implement the new procedures for authorizing visits to US facilities and areas announced by the Joint Committee on December 2, 1996.
<b>Markings on US Forces Official Vehicles</b>	Implement the agreement on measures concerning markings on US forces official vehicles. Numbered plates will be attached to all non-tactical US forces vehicles by January 1997, and to all other US forces vehicles by October 1997.
<b>Supplemental Automobile Insurance</b>	Education programs for automobile insurance have been expanded. Additionally, on its own initiative, the US has further elected to have all personnel under the SOFA obtain supplemental auto insurance beginning in January 1997.
<b>Payment for Claims</b>	<p>Make joint efforts to improve payment procedures concerning claims under paragraph 6, Article XVIII of the SOFA in the following manner:</p> <p>Requests for advance payments will be expeditiously processed and evaluated by both Governments utilizing their respective procedures. Whenever warranted under US laws and regulatory guidance, advance payment will be accomplished as rapidly as possible. A new system will be introduced by the end of March 1998, by which Japanese authorities will make available to claimants no-interest loans, as appropriate, in advance of the final adjudication of claims by US authorities.</p> <p>In the past there have been only a very few cases where payment by the US Government did not satisfy the full amount awarded by a final court judgment. Should such a case occur in the future, the Government of Japan will endeavor to make payment to the claimant, as appropriate, in order to address the difference in amount.</p>

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**Appendix I**  
**The Final Report of the Special Action Committee on Okinawa**

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<b>Quarantine Procedures</b>	Implement the updated agreement on quarantine procedures announced by the Joint Committee on December 2, 1996.
<b>Removal of Unexploded Ordinance in Camp Hansen</b>	Continue to use USMC procedures for removing unexploded ordinance in Camp Hansen, which are equivalent to those applied to ranges of the US forces in the United States.
<b>Continue Efforts to Improve the SOFA Procedures in the Joint Committee<sup>1</sup></b>	
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<b>The SACO Final Report on Futenma Air Station (an Integral Part of the SACO Final Report) Tokyo, Japan, December 2, 1996</b>	

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<b>Introduction</b>	At the Security Consultative Committee (scc) held on December 2, 1996, Minister Ikeda, Minister Kyuma, Secretary Perry, and Ambassador Mondale reaffirmed their commitment to the Special Action Committee on Okinawa (SACO) Interim Report of April 15, 1996 and the Status Report of September 19, 1996. Based on the SACO Interim Report, both Governments have been working to determine a suitable option for the return of Futenma Air Station and the relocation of its assets to other facilities and areas in Okinawa, while maintaining the airfield's critical military functions and capabilities. The Status Report called for the Special Working Group on Futenma to examine three specific alternatives: 1) incorporate the heliport into Kadena Air Base; 2) incorporate the heliport at Camp Schwab; and 3) develop and construct a sea-based facility (sea-based facility).
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<sup>1</sup> Marine Corps Bases, Japan officials stated that this item is an ongoing process and does not require any specific action as a result of the signing of the SACO Final Report.

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**Appendix I**  
**The Final Report of the Special Action**  
**Committee on Okinawa**

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On December 2, 1996, the SCC approved the SACO recommendation to pursue the sea-based facility option. Compared to the other two options, the sea-based facility is judged to be the best option in terms of enhanced safety and quality of life for the Okinawan people while maintaining the operational capabilities of United States forces. In addition, the sea-based facility can function as a fixed facility during its use as a military base and can also be removed when no longer necessary.

The SCC will establish a bilateral United States-Japan working group under the supervision of the Security Sub-Committee (SSC) entitled the Futenma Implementation Group (FIG), to be supported by a team of technical experts. The FIG, working with the Joint Committee, will develop a plan for implementation no later than December 1997. Upon SCC approval of this plan, the FIG, working with the Joint Committee, will oversee design, construction, testing, and transfer of assets. Throughout this process, the FIG will periodically report to the SCC on the status of its work.

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**Decisions of the SCC**

Pursue construction of a sea-based facility to absorb most of the helicopter operational functions of Futenma Air Station. This facility will be approximately 1500 meters long, and will support the majority of Futenma Air Station's flying operations, including an Instrument Flight Rules (IFR)-capable runway (approximately 1300 meters long), direct air operations support, and indirect support infrastructure such as headquarters, maintenance, logistics, quality-of-life functions, and base operating support. The sea-based facility will be designed to support basing of helicopter assets, and will also be able to support short-field aircraft operations.

Transfer 12 KC-130 aircraft to Iwakuni Air Base. Construct facilities at this base to ensure that associated infrastructure is available to support these aircraft and their missions.

Develop additional facilities at Kadena Air Base to support aircraft, maintenance, and logistics operations which are currently available at Futenma Air Station but are not relocated to the sea-based facility or Iwakuni Air Base.

Study the emergency and contingency use of alternative facilities which may be needed in the event of a crisis. This is necessary because the transfer of functions from Futenma Air Station to the sea-based facility will reduce operational flexibility currently available.

Return Futenma Air Station within the next five to seven years, after adequate replacement facilities are completed and operational.

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**Guiding Principles**

Futenma Air Station's critical military functions and capabilities will be maintained and will continue to operate at current readiness levels throughout the transfer of personnel and equipment and the relocation of facilities.

To the greatest extent possible, Futenma Air Station's operations and activities will be transferred to the sea-based facility. Operational capabilities and contingency planning flexibility which cannot be supported by the shorter runway of the sea-based facility (such as strategic airlift, logistics, emergency alternate divert, and contingency throughput) must be fully supported elsewhere. Those facilities unable to be located on the sea-based facility, due to operational, cost, or quality-of-life considerations, will be located on existing US facilities and areas.

The sea-based facility will be located off the east coast of the main island of Okinawa, and is expected to be connected to land by a pier or causeway. Selection of the locations will take into account operational requirements, air-space and sea-lane deconfliction, fishing access, environmental compatibility, economic effects, noise abatement, survivability, security, and convenient, acceptable personnel access to other US military facilities and housing.

The design of the sea-based facility will incorporate adequate measures to ensure platform, aircraft, equipment, and personnel survivability against severe weather and ocean conditions; corrosion control treatment and prevention for the sea-based facility and all equipment located on the sea-based facility; safety; and platform security. Support will include reliable and secure fuel supply, electrical power, fresh water, and other utilities and consumables. Additionally, the facility will be fully self-supporting for short-period contingency/emergency operations.

The Government of Japan will provide the sea-based facility and other relocation facilities for the use of United States forces, in accordance with the U. S.-Japan Treaty of Mutual Cooperation and Security and the Status of Forces Agreement. The two Governments will further consider all aspects of life-cycle cost as part of the design/acquisition decision.

The Government of Japan will continue to keep the people of Okinawa informed of the progress of this plan, including concept, location, and schedules of implementation.

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<b>Possible Sea-Based Facility Construction Methods</b>	<p>Studies have been conducted by a "Technical Support Group" comprised of Government engineers under the guidance of a "Technical Advisory Group" comprised of university professors and other experts outside the Government. These studies suggested that all three construction methods mentioned below are technically feasible.</p>
	<p>Pile Supported Pier Type (using floating modules)-supported by a number of steel columns fixed to the sea bed.</p>
	<p>Pontoon Type-platform consisting of steel pontoon type units, installed in a calm sea protected by a breakwater.</p>
	<p>Semi-Submersible Type-platform at a wave free height, supported by buoyancy of the lower structure submerged under the sea.</p>
<b>The Next Steps</b>	<p>The FIG will recommend a candidate sea-based facility area to the SCC as soon as possible and formulate a detailed implementation plan no later than December 1997. This plan will include completion of the following items: concept development and definition of operational requirements, technology performance specifications and construction method, site survey, environmental analysis, and final concept and site selection.</p>
	<p>The FIG will establish phases and schedules to achieve operational capabilities at each location, including facility design, construction, installation of required components, validation tests and suitability demonstrations, and transfer of operations to the new facility.</p>
	<p>The FIG will conduct periodic reviews and make decisions at significant milestones concerning sea-based facility program feasibility.</p>

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# Comments From the Department of Defense



INTERNATIONAL  
SECURITY AFFAIRS

## ASSISTANT SECRETARY OF DEFENSE

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10 FEB 1998

Mr. Mark E. Gebicke  
Director, Military Operations and Capabilities Issues  
National Security and International Affairs Division  
U.S. General Accounting Office  
Washington, D.C. 20548

Dear Mr. Gebicke:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "Overseas Presence: Issues Involved in Reducing the Impact of the U.S. Military Presence on Okinawa," received January 9, 1998 (GAO Code 703214/OSD Case 1518).

We concur with the recommendations set forth in the report. The GAO has done an excellent job of outlining the major operational and technical issues involved in realigning, consolidating and reducing U.S. force presence on Okinawa as set forth in the SACO process. The report's recommendations correspond closely with the perspective and activities of the Department as we continue to pursue implementation of the SACO agenda.

As the report notes, fulfilling the letter and spirit of the SACO Final Report is in the national security interest as it will place the U.S.-Japan alliance on a more stable and sustainable footing to continue the important work of promoting peace and stability in the Asia-Pacific region. Given our success during the Cold War and our continuing mutual interest in sustaining a strong alliance into the 21st century, we are fully confident that the U.S. and Japan will resolve successfully whatever issues and challenges we will face in pursuing the SACO process. In this effort, the role of Congress will be critical, both in support of our commitments and should other more contentious bilateral issues threaten to obstruct the basic strategic value of the relationship. For this reason, the GAO report is particularly timely and welcome.



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**Appendix II**  
**Comments From the Department of Defense**

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Additional technical comments were provided separately to the GAO staff. The DoD appreciates the opportunity to comment on the draft report.

Sincerely,

  
Franklin D. Kramer

# Major Contributors to This Report

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